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# COFFEE CULTURE

## Local Experiences, Global Connections

Second Edition

Catherine M. Tucker

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# COFFEE CULTURE

*Coffee Culture: Local Experiences, Global Connections* explores coffee as (1) a major commodity that shapes the lives of millions of people; (2) a product with a dramatic history; (3) a beverage with multiple meanings and uses (energizer, comfort food, addiction, flavoring, and confection); (4) an inspiration for humor and cultural critique; (5) a crop that can help protect biodiversity yet also threaten the environment; (6) a health risk and a health food; and (7) a focus of alternative trade efforts. This book presents coffee as a commodity that ties the world together, from the coffee producers and pickers who tend the plantations in tropical nations, to the middlemen and processors, to the consumers who drink coffee without ever having to think about how the drink reached their hands.

**Catherine M. Tucker** is a sociocultural and ecological anthropologist at the University of Florida.

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Tucker adroitly integrates cross-cultural comparisons, social theory, and the insights collected during more than two decades of research conducted in places that range from Colombia's coffee fields to university cafes. In this ambitious and updated biography of the bean, she shows how we are linked physically, symbolically, and economically to coffee. A must-read for students, sophisticated coffee drinkers, and anyone interested in sustainable food systems.

Christopher M. Bacon, Associate Professor, Environmental
Studies, Santa Clara University

# COFFEE CULTURE

## Local Experiences, Global Connections

Second Edition

*Catherine M. Tucker*

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In memory of Janice Rand Tucker

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# CONTENTS

*List of Illustrations* xi
*Series Foreword* xii
*Preface* xiv
*Acknowledgments* xvi
*Acronyms and Abbreviations* xviii

**PART I**
**COFFEE CULTURE, SOCIAL LIFE, AND GLOBAL HISTORY** **1**

1 Culture, Caffeine, and Coffee Shops 3

2 Theories of Food and Social Meanings of Coffee 11

3 Coffee Culture, History, and Media in Coca-Cola Land 18

4 Tracing Coffee Connections 26

5 Coffee and the Rise of the World System 36

6 Coffee, the Industrial Revolution, and Body Discipline 45

**PART II**
**ACCOLADES AND ANTIPATHIES: COFFEE CONTROVERSIES THROUGH TIME** **51**

7 Coffee Controversies and Threats to Social Order 53

8 National Identities and Cultural Relevance 59

9 Coffee Waste, Consumer Choices, and Activism on College Campuses 67

10 Is Coffee Good or Bad for You?: Debates over Physical and Mental Health Effects 75

**PART III**
**COFFEE PRODUCTION AND PROCESSING 81**

11 Planting and Caring for Coffee 83

12 Harvesting, Processing, and Inequality 88

13 Environmental Sustainability of Coffee Production 96

14 Environmental Conundrums of Coffee Processing 104

**PART IV**
**MARKETS AND THE MODERN WORLD SYSTEM 111**

15 Market Volatility and Social Calamity 113

16 Efforts to Mitigate the Coffee Cycle and the Distribution of Power 119

17 A Brief History of Fair Trade 127

18 Conundrums of Fair Trade Coffee: Building Equity or Reinventing Subjugation? 137

19 Riding the Next Wave of Coffee: Possibilities for Transformation 144

*Appendix: A Coffee Culture Timeline* 149
*References* 152
*Index* 165

# ILLUSTRATIONS

## Figures

4.1 Bags of coffee 27
11.1 Transplanting coffee seedlings 85
11.2 Coffee nursery 85
12.1 Coffee ripening on a branch 89
12.2 Diagram of a coffee cherry 90
12.3 Child picking coffee 94
13.1 Shade coffee plantation 98
14.1 Sorting beans in dry processing 105
14.2 Small manual pulping machine 106
14.3 Raking coffee beans to dry 107
14.4 Hothouse used to dry coffee beans 108
14.5 Decomposing coffee cherries 108
16.1 Conventional coffee commodity chain 124

## Tables

11.1 Steps in Typical Arabica Coffee Production and Maintenance 86
17.1 Fair Trade Timeline 129

# SERIES FOREWORD

The premise of these short books on the *Anthropology of Stuff* is that stuff talks, that written into the biographies of everyday items of our lives—coffee, T-shirts, computers, iPods, flowers, drugs, and so forth—are the stories that make us who we are and that make the world the way it is. From its beginning, each item bears the signature of the people who extracted, manufactured, picked, caught, assembled, packaged, delivered, purchased, and disposed of it. And in our modern market-driven societies, our lives are dominated by the pursuit of stuff.

Examining stuff is also an excellent way to teach and learn about what is exciting and insightful about anthropological and sociological ways of knowing. Students, as with virtually all of us, can relate to stuff, while at the same time discovering through these books that it can provide new and fascinating ways of looking at the world.

Stuff, or commodities and things, are central, of course, to all societies, to one extent or another. Whether it is yams, necklaces, horses, cattle, or shells, the acquisition, accumulation, and exchange of things is central to the identities and relationships that tie people together and drive their behavior. But never, before now, has the craving for stuff reached the level it has; and never before have so many people been trying to convince each other that acquiring more stuff is what they most want to do. As a consequence, the creation, consumption, and disposal of stuff now threaten the planet itself. Yet to stop or even slow down the manufacture and accumulation of stuff would threaten the viability of our economy, on which our society is built.

This raises various questions. For example, what impact does the compulsion to acquire stuff have on our economic, social, and political well-being, as well as on our environment? How do we come to believe that there are certain things that we must have? How do we come to value some commodities or form of commodities above others? How have we managed to create commodity chains that link peasant farmers in Colombia or gold miners in Angola to wealthy residents of New York or teenagers in Nebraska? Who comes up with the ideas for stuff and how do they translate those ideas into things for people to buy? Why do we sometimes consume stuff that is not very good for us? These short books examine such questions, and more.

Catherine M. Tucker's book *Coffee Culture: Local Experiences, Global Connections* beautifully captures the intent of the *Anthropology of Stuff* series. The book tells the story of coffee, beginning with its role in establishing social meeting places in which scientists contemplated and discussed the nature of the universe, where political plots of various sorts were hatched, and where friends met to talk about their lives, experiences, and problems. She discusses the meaning that coffee has in people's lives, from its role as a marker of the daily work cycle to the meanings created by marketers to associate their product with desired moods and activities. And most of all, she describes the role of coffee as one of the world's most traded commodities, how it impacts workers occupying various points on the commodity chain, and how it affects the environments in which it is grown. She tells of the importance of coffee in the creation and maintenance of national identities and the impact it has on people's health. The story of coffee, as with much of the stuff of our lives, tells us about our culture and ourselves, and this book instructs us how to decipher that story.

# PREFACE

Drinking coffee is the final step in a chain that connects us to farmers in tropical nations around the world who produce it. Through coffee, we are intimately tied to a global economic system that has evolved over half a millennium. Coffee is the second most valuable commodity produced by developing countries (after petroleum), but many of the 25 million farmers whose livelihoods depend on coffee earn barely a dollar a day. They live in some of the most biodiverse and endangered habitats of the world, and traditional coffee production has coexisted with forests by retaining shade and native trees. Yet market incentives favor sun-grown coffee, which requires forest clearing and use of toxic agrochemicals. Currently, climate-change processes appear to be threatening the future of coffee production. Thus coffee production has a bearing on some of the world's most pressing problems, including social inequality, biodiversity conservation, and environmental change.

For most of us, global issues of coffee production remain far from our consciousness. Instead, coffee is simply part of our lives. Even for those who avoid drinking it, coffee is inescapably present in Western society. For a beverage that has minimal nutritional value, it has acquired a plethora of meanings that vary across individuals and societies. Unlike most foods, coffee has raised an unending series of controversies over its possible impacts on health, social order, and individual well-being. More important for most of us is that coffee provides an excuse to hang out with friends, a vehicle for humorous social commentary, a way to relax, and a medium to promote productivity.

The book provides an overview of coffee, from its historical background and controversies, to socioeconomic and environmental aspects of production and processing, to the inequities of global coffee markets and efforts to foster fairer trade relations. Through brief chapters exploring different aspects of coffee culture, I present coffee as a commodity that ties the world together, from the coffee producers and pickers who tend the plantations in tropical nations to the consumers who drink coffee without ever having to think about how the drink reaches their hands. I relate the material to theoretical insights from anthropology and other social sciences, which are useful for interpreting the roles of coffee in our lives and the world.

This second edition has been updated to reflect current statistics and ongoing changes in coffee markets. New material focuses on consumer waste related to coffee consumption, and the efforts of student organizations to establish campus commitments to zero waste and fair trade. The last chapter offers a synthesis by considering the third wave of coffee in light of the book's main themes.

I come to this book as someone whose perspectives on coffee have changed throughout my life. I did not drink coffee for the first 21 years of my life. A semester of study abroad in Colombia as a college student introduced me to coffee drinking and coffee plantations, but I did not find them as interesting as other aspects of Colombian culture. During graduate school I resorted to coffee as the most economical way of staying alert for long hours of study. Not until starting my dissertation research, however, did I start to think about coffee seriously. I began studying community forest management in western Honduras in 1993, and since then have witnessed a dramatic transition from subsistence farming and traditional coffee agroforestry to export coffee production. Coffee became an obsession for me as I realized what it meant to the people who grew it, the ways that expanding plantations transformed people's relationships with each other and their natural environment, and the possibilities and problems that it posed. I confess fondness for coffee, the people who grow it, and the people who consume it, but I am appalled at the problems it creates and what I now know to be a history of agony hidden in each cup. I attempt to maintain intellectual objectivity, but my understanding is informed by affection and outrage, all for a deceivingly innocuous yet world-shaking substance that rests even now in a cup at my side.

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Teaching a course on coffee culture over the past 9 years has encouraged me to keep learning more about coffee—there's nothing like challenging questions from enthusiastic undergraduate and graduate students to compel a close examination of the facts and elicit new perspectives. Therefore, I thank my students for pushing me to learn more, while also injecting their good humor and personal insights into my appreciation for coffee. Christina Callicott merits a special acknowledgment for providing excellent assistance tracking down current data and information for this edition.

Any writing effort benefits from others' feedback and good editors. I am grateful to eight anonymous reviewers who offered suggestions to revise the book, as well as for the recommendations of Warren Belasco of the University of Maryland. Special thanks go to Richard Robbins, who encouraged me to develop my ideas for the topic. Joanna Broderick, editor extraordinaire, receives my deepest thanks for checking the entire manuscript carefully. Any errors or oversights that remain are my own.

Most of all, I thank my parents, whose love and unwavering support have been a touchstone throughout my life. My mother, Janice Rand Tucker, has now gone on, but her strength and courage inspire me still. I hope to emulate my father, Tom Haswell Tucker, who maintains a positive outlook whatever life brings, and shares joy wherever he goes. Percy and Alec, I thank you for more than I can express, including your good-natured tolerance (and liberal teasing) of my fascination with everything about coffee.

# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| ATO | alternative trade organization |
| EFTA | European Fair Trade Association |
| FLO | Fairtrade Labelling Organizations International |
| FNC | National Federation of Coffee Growers of Colombia |
| ICA | International Coffee Agreement |
| ICO | International Coffee Organization |
| IFAT | International Federation for Alternative Trade |
| ISI | import-substitution industrialization |
| NAATO | North American Alternative Trade Organizations |
| NAFTA | North American Free Trade Agreement |
| NEWS | Network of European Worldshops |
| ONCP | Overseas Needlepoint and Crafts Project |
| Oxfam | Oxford Committee for Famine Relief |
| TNC | transnational corporation |
| TSC | The Sustainability Consortium (Walmart) |
| UNCTAD | United Nations Conference on Trade and Development |
| WFTO | World Fair Trade Organization |

# Part I

# COFFEE CULTURE, SOCIAL LIFE, AND GLOBAL HISTORY

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# 1

# CULTURE, CAFFEINE, AND COFFEE SHOPS

> *The line at the coffee shop backs up to the door this weekday morning. Businessmen, university students, and office workers wait patiently (or not) to place their orders. I am seated at one of the small tables, checking my e-mail through the shop's free Wi-Fi and drinking a delicious latté. Nearly all of the tables and easy chairs are occupied with individuals reading newspapers, couples talking, casually dressed young adults surfing the Internet with their laptops, and small groups of people who appear to be professionals on a coffee break. Conversations create a quiet background murmur, and the shop maintains a comfortable ambience with stained wood décor, stylish wall art with a coffee theme, sofas and easy chairs around low coffee tables, and small circular tables with simple wooden chairs. Although a few customers choose tea, coffee is king here. Similar to most of the people in the shop, I want good, strong coffee in the morning. Anything else would be a poor substitute. I check my watch; it's time to get to the conference I am attending. I shut down my laptop, slip it into the case, and set my coffee mug on the counter. "Gracias," I say to the friendly barista. Walking out to the congested streets of Guatemala City, I realize that except for the language and a few other details, I might have been at a coffee shop in the USA or almost anywhere else in the world.*

Coffee shops have become a global phenomenon. Although coffee shops, or coffeehouses, have existed for nearly 500 years, in the past few decades they have experienced a dramatic expansion. It has become common to find coffee shops, coffee bars, and kiosks in places where they were once rare or nonexistent—Hong Kong, Mexico City, Dublin, Rio de Janeiro, Tokyo, Sydney, New Delhi, or Johannesburg, and almost every major airport on the planet. Many factors contributed to the expansion, including the globalization of consumer culture, growing appreciation of high-quality coffee, and the public's eager acceptance of casual spots to study, relax, socialize, or pick up an energizing drink. Growth of the World Wide Web played a role; it led to a synergistic convergence between caffeine and Internet access in coffeehouses and cybercafés. Coffee shop expansion has been accompanied by gradual growth in global coffee consumption since 2000, after several decades of lagging consumption (ICO 2015). Chains specializing in coffee have become global leaders in the restaurant business. Starbucks ranked second only to McDonald's in worldwide sales in 2014 (Nation's Restaurant News 2015; Technomic 2015:15), while the United Kingdom's Costa Coffee ranked seventh globally among restaurant chains headquartered outside the USA (Nation's Restaurant News 2015). Coffee shops have become so ubiquitous that it is fair to say that they have impacted global culture (T. Clark 2007).

Growing coffee consumption and the popularity of coffee shops represent only the latest evidence of humanity's long-standing fondness for coffee drinking, which seems to have begun around the fifteenth century. During the sixteenth century, it spread throughout the Middle East and caught the attention of European travelers and traders. By the seventeenth century, coffee had become one of the first global commodities. Struggles to control its production and distribution led to wars, added fuel to Europe's colonial ambitions, exacerbated the eighteenth- and nineteenth-century slave trade, and set in motion economic and political relationships that still influence the global economy and international affairs (Bates 1997; Clarence-Smith and Topik 2003). Without coffee, the world as we know it would not exist.

For many societies, coffee is a customary drink and an integral part of life. Worldwide, only water, tea, milk, and perhaps soft drinks appear to be consumed more frequently than coffee. (Global rankings for beverage consumption vary because no one really knows how many cups of water, tea, and coffee are consumed in homes, while soft drinks and liquid milk usually are sold in easily counted bottles.) Most consumers prepare their own coffee; in 2015, US coffee consumers drank 74 percent of their coffee at home (Statista 2015). Coffee's presence has become so integral to many people's lives that most continue to drink it even if prices rise or the economy slows. During the global economic recession of 2008, many coffee drinkers saved money by reducing visits to coffee shops and restaurants and increasing the amount of coffee prepared at home. Expansion in specialty coffees continued unabated, driven by upper socioeconomic classes with disposable income (Mintel 2009). Meanwhile, the amount of coffee consumed worldwide has edged upward since 2000. The International Coffee Organization (ICO) (2016) estimates that in 2015, the world produced almost 19 billion pounds of coffee, which translates to 606 billion 6-oz cups.

The prevalence of coffee comes through in the media. Uncounted songs, comics, television shows, advertisements, and movies call attention to coffee and coffee shops, in minor or major ways. Media attention in the present continues coffee's long history of attracting public attention and sparking social concerns. We receive news about possible health risks or benefits of coffee consumption, worry whether children should drink coffee, and might wonder if we should stop drinking coffee when an extra cup makes us jittery or missing a dose leads to a caffeine headache. We hear debates over the differences between fair trade and free trade coffee. We express avid opinions about Starbucks, and may even read articles discussing the merits of organic versus conventional coffee production. Other beverages have their controversies, but few seem as protracted and recurrent as those surrounding coffee.

Why coffee? Why is it popular in the USA and nearly all the world? Why is it often a subject of controversies? Perhaps the more important question is this: Why and how does coffee matter in how we live our lives? In the coming pages, I consider these questions by looking at the culture, meanings, and histories of coffee, and how coffee production and consumption relate to some of the world's most pressing problems.

This book is divided into four parts. The first part examines the whys of coffee: why (and how) coffee has acquired global presence, and why it has become part of social life in the USA and around the world. It considers cultural experiences and meanings, theoretical approaches to understanding coffee, and the role of coffee in the development of the modern world system. The second part considers why and how coffee has been consistently a subject of social commentary, critique, and controversy by looking at social debates over coffee consumption, national identities, and medical concerns, and the ramifications of consumption for environmental sustainability. The third part explores the practical, social, economic, and environmental dimensions of coffee production. It asks the question, can coffee production be environmentally and socially sustainable? In light of the uncertainties of coffee's sustainability, the fourth part ponders how international coffee markets and the global economic system have influenced the experiences of producers and consumers. This section pays particular attention to the promises and pitfalls of fair trade coffee, and how consumer decisions, producer constraints, and the behavior of multinational corporations interact to affect the potential for a global coffee system that is sustainable and fair. Exploring the many dimensions of coffee serves as a frame to consider how the world works today. It illuminates experiences that we share, problems that challenge us, and struggles of people across time and space to assert their human rights (even the minor right to drink coffee) and build a society that meets their needs and ideals.

I begin by exploring why coffee is popular around the world. Caffeine, commonly recognized as the world's most popular drug, provides a launching point. Thereafter, I consider the role of culture in giving meanings to coffee, and consider the popularity and appeal of coffeehouses and cybercafés. In subsequent chapters, I turn to the characteristics of coffee that have facilitated its global reach, the interpretations and expressions of coffee as a meaningful food, and the economic and historical processes that made coffee a preeminent beverage in the Western world.

## Caffeine

The whys of coffee's popularity start with caffeine. With the exceptions of milk and water, beverages that typically contain caffeine hold the top spots in global beverage consumption: tea, coffee, and many soft drinks. More than 60 plants produce caffeine naturally; the bitter alkaloid (classified as a methylxanthine) repels many pests, bacteria, and fungi, and can inhibit weed growth (Lundsberg 1998; Prenosil *et al.* 1987). For humans, caffeine acts as a stimulant, but unlike many other drugs, caffeine is generally regarded as safe (Lamarine 1998). Caffeine-containing plants have been nurtured for their seeds, leaves, and nuts since early civilizations discovered their useful and pleasant qualities, which often included rich flavors linked to their caffeine content. Many of these plants also provide antioxidants and amino acids, which may enhance flavor and aroma while offering healthful benefits. One creative thinker proposed that plants produce caffeine as a ploy to enlist human assistance for reproductive success—pointing to the possibility of co-evolutionary processes between human society and caffeine-containing plants (Pollan 2001). Another author suggested that it is no coincidence that early humans evolved in Ethiopia, the birthplace of coffee (Wild 2004). From their earliest acknowledgment in the historical record, coffee beans were recognized for their medicinal and energizing effects. If people had not felt pleasant effects from caffeine, it is unlikely that they would have been interested in collecting, processing, and preparing coffee beans.

Most sources of caffeine are consumed primarily where they grow. Popular sources of caffeine besides coffee beans are tea leaves, cacao (cocoa) beans, kola nuts, guarana seeds, and leaves and twigs of the yerba maté plant. More tea is consumed in China and India than anywhere else, and those nations typically rank first and second in global tea production (Beverage Marketing 2009). South Americans drink infusions of ground guarana seeds from the Amazon basin. Yerba maté, consumed as a hot tea, is widely popular in Uruguay, Paraguay, Brazil, and Argentina where the tree is native, although it has been gaining fans internationally. Coffee and cacao (transformed into chocolate) break the pattern; most of the major consuming nations are located far from the sites where they grow. The same might have been true of tropical Africa's kola nuts, but most cola drinks today use synthetic flavors rather than kola nut extract (*Encyclopaedia Britannica* 2010).

Why is coffee enduringly and expansively popular, not simply where it grows, but in distant places? Caffeine content alone does not explain coffee's global popularity. While coffee can serve as a useful stimulant, a number of the world's coffee drinkers prefer decaffeinated coffees or prepare weak coffee to reduce caffeine content. Moreover, most locales have alternative or less-expensive sources of caffeine available, including energy drinks, tea, chocolate, sodas, diet aids, analgesics, and caffeine tablets. Therefore, coffee's popularity derives from more than its stimulating qualities; it encompasses social and cultural dimensions.

## Coffee Culture

Coffee is a material substance, but culture infuses coffee with social and symbolic meanings. *Culture* can be defined as everything that humans think, have, and do as members of a society (Ferraro 2006). As water is for fish, culture is for humanity. It is our all-encompassing environment, and may be invisible unless we are separated from our own cultural contexts. Through culture, consuming coffee can affirm identity, express values, or affirm social ties. Coffee, as with many foods and beverages, has proven easily adaptable to different cultural contexts. Coffee combines well with many flavors and additives; therefore it fits within existing cuisines and evolving tastes. But what does *coffee culture* mean? As used here, it refers to the ideas, practices, technology, meanings, and associations regarding coffee. One could say that Starbucks has a specific coffee culture. Members express it by frequenting Starbucks cafés, knowing the right terminology to order specialty drinks (venti caramel macchiato, double-tall low-fat decaf latté, grandé no-foam peppermint white chocolate mocha, and so forth), and perhaps supporting the ideals of Starbucks' mission statement or buying stock in the company. Coffee culture can unite actions, beliefs, and special knowledge to distinguish members from nonmembers, and the more knowledgeable from the less knowledgeable. Coffee has become popular as a local and global beverage in part because people see coffee as "our own." Coffee becomes meaningful for many reasons, which include the attachments or fondness that people develop for the ways that coffee is prepared and served, the places or contexts in which they consume coffee, and the ideas and feelings associated with drinking coffee. More of the world's coffee is consumed in homes than in any other place, thus coffee has become part of the comforts of family life for many adults. But coffee is also omnipresent in public life, where coffeehouses have played a key role in popularizing coffee and building coffee culture.

## Coffeehouse Appeal

Coffee shops are as much about a place and an experience as they are about serving a beverage. Historically, coffeehouses gained fame as places for intellectual discussions, political debates, and free social expression (Connery 1997). Adam Smith wrote his influential political treatise *The Wealth of Nations* in a coffeehouse. Isaac Newton's groundbreaking *Principia Mathematica* grew out of a challenge to resolve an argument that had started in a coffeehouse, during which no one had been able to prove why planets had elliptical orbits (Standage 2005). Today, coffee shops retain a reputation as social meeting places, but depending on their location and clientele, may also be places to study, relax, or simply grab an invigorating drink. They appeal to the human desire for social interaction and connection to others, even if one plans to be alone. One Viennese commentator characterized coffeehouses as "the ideal place for people who want to be alone but need company for it" (Pendergrast 1999:380).

Through coffeehouses, people can sense or imagine the "small world" nature of society. Most of us have had moments of experiencing society as a small world, such as learning that someone we just met has a friend who grew up in our neighborhood. In "small world" theory, any pair of individuals in the world can be connected through only several degrees of separation (Milgram 1967). The game "six degrees of separation" plays on this idea. It is an open question of whether society is really a small world or humans try to envision small worlds as a way to make the world seem more comprehensible (Stafford 2003). In either case, coffeehouses provide opportunities to perceive a small world or create one, by offering something familiar in far-flung corners of the globe and our own hometowns.

While coffeehouses share common aspects—especially coffee and sociality—they attract distinct clienteles by offering unique atmospheres, a variety of services and ancillary products (books, music, art work), and different qualities, origins, blends, or preparations of coffee. These distinctions have been accentuated through intentional, and sometime accidental, niche marketing, which has antecedents in seventeenth-century London, where coffeehouses catered to different clienteles and professions. Niche marketing in coffee shops took off in the USA during the 1980s in response to changes in coffee-drinking patterns. Between 1960 and 1988, the percentage of the adult population that consumed coffee in the USA fell gradually from 74 percent to 50 percent (Roseberry 1996). Small coffee roasters and independent coffee vendors realized that they needed to expand their clientele and attract young people who had grown up preferring soft drinks. Meanwhile, the transnational corporations (TNCs) that dominated coffee markets (e.g., Nestlé, General Foods, Philip Morris) sought to increase their profits and decided to produce successively cheaper (and therefore less flavorful) coffee, which most likely contributed to falling demand. Independent entrepreneurs took advantage of the lack of good coffee to draw clients who appreciated quality, flavor, and variety (Roseberry 1996).

Starbucks became an early trendsetter by introducing the modern coffeehouse to US society (Dicum and Luttinger 1999). Starbucks started small, but they distinguished themselves by a commitment to quality and as "a third place" apart from work and home. By 2014, the corporation had 21,366 stores and outlets in 65 countries (Starbucks 2014). As Starbucks grew into a global coffee behemoth, it gained a great deal of attention, and inspired a generation of coffee entrepreneurs to open their own coffee shops. Starbucks gained a reputation for purposefully driving local coffee shops and smaller chains out of business (T. Clark 2007). Many independent coffeehouses, however, have competed in crowded markets by catering to customers, providing unique beverages, and creating special atmospheres or services to complement local tastes or attract certain groups. Examples of clever approaches abound. For example, a Taiwanese coffee chain serves a hugely popular coffee topped with salt-infused foam (Greenberg 2010), which has been spreading widely. In Banda Aceh, Indonesia, customers like coffee poured over a raw egg to drink for breakfast (Iijima 2010). In Houston, Coffeegroundz Café expanded its clientele by taking to-go orders through Twitter (O'Grady 2008). Creative niche marketing has helped independent operations to survive; they account for more than half of the coffeehouses in the USA (Majority 2004).

### Cybercafés Linking Physical and Virtual Coffeehouses

By providing Internet access, cybercafés opened new horizons for coffeehouse customers to experience "small worlds." While traveling, I've come to rely on coffeehouses as places that typically offer free or low-cost Internet access. The growth of Facetime, instant messaging, and social media—Twitter, Instagram, and their relatives—depends on the Internet, and coffeehouses have embraced the opportunity to link coffee consumption with virtual as well as face-to-face social interaction. The Internet allows coffeehouses to extend their reach as places of social interaction and centers to exchange news and information. The interactions may be virtual, but coffeehouses provide a physical bridge for communicating through cyberspace. One industry report noted, "People are now given the option to make a connection over a cup of coffee and/or over the internet" (Holmes 2004:3). The Internet operates with the social dynamism, challenges to the status quo, and disdain for authority that once characterized Europe's early coffeehouses; thus the Internet acts as a virtual coffeehouse (Connery 1997). It seems logical that brick-and-mortar coffeehouses embraced the Internet as an extension of their role as places for social interaction.

## Local and Global Dimensions in Coffeehouses

Coffeehouses can recreate and symbolize the global influence of Western coffee culture while expressing the uniqueness of a specific locale or cultural context. The coffee shop I patronized in Guatemala City created an atmosphere reminiscent of a Starbucks. However, they used ceramic mugs more than paper cups, and the walls featured photos with scenes of rural Guatemala and Mayan peoples in coffee fields. The combination acknowledged global coffee culture and Guatemalan coffee traditions at once. Through history and across cultures, however, coffee has meant more than the sociality and casual community of coffeehouses. Coffee has been associated with subjugation, revolution, resistance, and intense debates (Chapter 7), but also family life and friendship. Drinking coffee has taken on meanings and values that fit specific locales, while resonating broadly with globalized understandings. The modern world presents many interstices where local experiences and understandings interact with globally disseminated messages and representations. Anthropologists and food scholars wrestle with interpreting this complex landscape of meaning and practice through theoretical approaches that address the whys and hows of foods as meaningful substances, to which we now turn.

## Questions for Reading, Reflection, and Debate

1. Why do you think coffeehouses are popular?
2. What is niche marketing? How does it relate to the concept of "coffee culture"?
3. Consider the "small world" theory. What experiences in your life would support the theory? What experiences would seem to contradict it?

# 2

# THEORIES OF FOOD AND SOCIAL MEANINGS OF COFFEE

> Food is always about more than simply what fills the stomach.
>
> Rouse and Hoskins 2004:226

What explains differing perceptions of coffee, tea, and other beverages? What are the reasons for a group of people to prefer one food over another, or deem certain foods as especially desirable while other foods seem ordinary? How do foods acquire meanings, and how do meanings and attitudes toward food interrelate with other aspects of social life? What roles does food play in a globalizing world? These are the kinds of questions that social theorists and food scholars have been exploring. Since the 1950s, food has become an increasingly pertinent topic for scholars studying cultural identity, social change, and globalization (Mintz and Du Bois 2002). Coffee offers interesting opportunities for study because of its ubiquitous presence in modern social life, its relationships to global markets as well as group and national identities, and its economic and political dimensions.

A number of approaches exist for theorizing about the relationships among food, culture, meaning, and social change. I introduce three theoretical approaches that help us think about the role of coffee, its meanings, and its popularity around the world. The first approach, presented by Claude Lévi-Strauss (1983, 2008), proposes that societies follow similar patterns for interpreting foods due to the way the human mind works. By understanding the mental structures that underlie perceptions, we gain insight into how societies assign values and meanings to food. The second approach, developed by Pierre Bourdieu (1984), examines taste in food and other cultural preferences as emerging from social-class differences, and the tensions and contrasts among groups in complex societies. The third approach investigates the connections within and across societies to understand the uses, ideas, and meanings of food, and explores the economics of global trade. It asks how these connections shape our lives, and what the implications are for the environment, local and global society, and the ongoing evolution of the modern world system. Each of these approaches contributes to interpreting coffee's role in modern society.

### Raw, Cooked, or Rotten? Mental Structures and Perceptions of Food, Nature, and Culture

Cross-cultural commonalities in meanings and values ascribed to foods may relate to ways that the human mind interprets and categorizes the world. Lévi-Strauss (1983, 2008), a renowned French anthropologist, proposed that foods fall into one of three broad categories: "raw," "cooked," or "rotted." After collecting information on myths and food beliefs around the world, he argued that while societies vary in how they interpret the meanings of food, they still deal with dualities such as raw/cooked, raw/rotten, and cooked/rotten, which symbolize and echo other oppositions: nature/culture, good/bad, edible/inedible, self/other, desirable/repulsive. Raw foods are "natural," "unprocessed," and "wild"; they often require some kind of preparation, such as washing, peeling, and cutting to be deemed edible. Cooked foods have been transformed through roasting, boiling, or smoking to become "civilized." Societies tend to regard roasting, boiling, and smoking as having different levels of prestige. Among Western societies, roasting tends to have higher prestige than boiling. The relative status of these forms of cooking varies across history and people. There is no universal way to ascertain a food's position in a cultural system of meaningful oppositions and dualities. Instead, it is necessary to understand a people's perspectives and experiences.

The way society categorizes a food reflects its prestige, usefulness, and potential risks, which relate to historical, political, and economic processes, and preferences whose roots may be long forgotten. Perceptions of food risks emerge because of the ways society links edible substances to social values and experiences. Edible food discarded by restaurants and grocery stores becomes "rotted" the moment it hits the dumpster (even if a hungry person retrieves that food to eat, he or she would be aware of how society classifies the food). In the USA, insects are considered to be inedible, but in most of the world, people recognize certain insects as delicious and nourishing foods (Bryant *et al.* 2003). The television show *Fear Factor* played upon Western distastes by challenging contestants to do potentially unpleasant things, such as eating insects, while competing for monetary prizes. Contestants who chose to eat the insects symbolically and physically transformed the inedible to the edible, defying one social norm in order to fulfill another social norm: willingness to sacrifice for monetary gain. In forcing contestants to choose between social norms, the show compelled the audience to question where their preferences and priorities lay. Can something repulsive be made tolerable by the possibility of enrichment (and fleeting fame)? Few Westerners found the answers simple. Lévi-Strauss's perspective (1983, 2008) helps us understand that the dilemma emerges from Western perceptions of underlying oppositions. For someone from an insect-eating society, there would be no opposition or repulsion, and no dilemma.

Coffee does not present moral conundrums for most drinkers, but how does society interpret coffee? Clearly, coffee is "cooked." It has been roasted, ground, and mixed with water by some means—boiling, percolating, filtering, pressing, or steaming under pressure. In this sense, coffee is a complex culinary creation that signifies civilized society. Yet coffee is also represented as something "natural," "wild," and uncivilized in Western cultures, because of its associations with exotic origins and dangerous diseases that medical science does not understand well. The perceived risks of coffee led certain religions to ban it and some physicians to warn against it, while the perceived benefits and status of coffee resulted in the creation of coffee breaks and contributed to its prevalence in social life.

### Society, Class, and Taste

The meanings and use of coffee may also be influenced by social relations and class divisions. The French social scientist, Pierre Bourdieu (1984), conducted a detailed survey of the French population to explore relationships among education, occupation, cultural knowledge, economic resources, preferences, and behaviors. The analysis found that different occupational classes in French society express distinctive patterns in cultural knowledge, economic resources and preferences, and taste. Members of privileged classes, composed of those with well-paying jobs and/or inherited wealth, have tastes in food, art, music, clothing, and so on that relate to greater economic resources and higher education in prestigious schools. They have autonomy to make choices, and can define luxury. Among the middle and less-privileged classes, the levels of education and economic resources restrict options, and necessity influences their choices. They develop meaningful preferences for food among the options available to them. Bourdieu's work, which cannot be treated adequately here, showed that the conditions of people's lives shape how they structure, perceive, and experience the world, and therefore evolve distinctive lifestyles and ways of thinking. Class differences thus entail much more than economic inequality. They encompass contrasting knowledge, perceptions, and preferences. These differences inform and justify symbolic, political, and material struggles between classes within a society. Bourdieu's insights suggest that meanings and preferences associated with coffee, as well as knowledge and access to information about coffee, likely will vary across different social classes in any given society. Moreover, ideas and meanings are subject to negotiation and contestations as different classes in society interact and attempt to advance their interests and values.

## Complex Connectivity: Food Production, Consumption, and Globalization

Tracing the connections that constitute global networks can reveal relationships and processes that have shaped the uses and meanings of particular foods. A number of studies have examined the histories, social–environmental interconnections, and commodity chains of specific foods. They have discovered unexpected relationships and impacts that have helped create the modern world (Cohen 1997; Kurlansky 1997; Ryan and Durning 1997; Zuckerman 1998). Mintz's work *Sweetness and Power* (1986) explored the evolution of sugar from a rare spice to an integral component of European diets. He showed how a single commodity linked Europe, Africa, and the Americas in patterned exchanges of goods and humanity (slave trade). Sugar production and consumption played critical roles in the Industrial Revolution, and had ramifications for society, ethnic and political relations, and worker health. Foster's study of Coca-Cola (2008) explored the complications and contradictions of globalization, as consumers around the world were tied into world markets. He points out that commodities can disembed social relationships and undermine cultures, or be re-embedded in local relations and contexts in ways that challenge or mock globally disseminated meanings and values. For example, women in Papua New Guinea began to use empty soda cans to carry and cook a meal of rice when they visited friends; the cans filled a social need once met by bamboo tubes. Thus local people can creatively integrate the global into the local (Foster 2008:11).

Coffee, similar to many other foods and commodities, is caught up in global networks that connect people who live in vastly different cultural, environmental, and economic contexts. Global networks create relationships across great distances, between producers and consumers, among consumers with shared concerns, and across divides of culture and perceptions. Enjoying a cappuccino, eating mocha ice cream, or smelling the aroma of fresh-brewed coffee only occurs because distant parts of the world are tied together in a global chain of people who grow, pick, transport, process, distribute, and finally consume coffee beans. Over the last century, the coffee chain has experienced globalizing processes, which can be understood as complex connectivity associated with intensifying connections and interdependencies (Tomlinson 1999). These evolving relationships have led to novel alliances and consumer–producer linkages, as in the fair trade movement. Global networks provide contexts in which struggles occur over flows of money and the distribution of costs and benefits from trade, as well as meanings and values.

Examining the economic and political relations that structure the global coffee system, and the vast numbers of people involved in coffee production and consumption, helps explain why coffee is an extraordinarily valuable and contested commodity. An estimated 25 million farmers grow coffee across 60 countries. Another 100 million people depend on coffee for their livelihoods as coffee pickers, middlemen, processors, roasters, transporters, and distributors (Consumers International 2005; Osorio 2002). That number doesn't count the factory owners and workers who produce the chemical inputs that growers often use to increase their yields, or the laborers who manufacture the equipment used to process or transport the coffee. All of these people help supply enough coffee to meet global demand. Millions of people—over 100 million people in the USA alone—drink coffee. Similarly, the global coffee market is highly fragmented, with hundreds of coffee companies that hold retail, specialty, and food service (restaurant) brands. But the top 50 coffee companies dominate nearly 90 percent of the market, and actual control is in even fewer hands because international investment conglomerates have purchased a number of the leading companies (First Research 2016). For example, the JAB group owns the majority of shares in Jacobs Douwe Egbert, Keurig Green Mountain, Peets Coffee & Tea, Stumptown, and Caribou Coffee, among others (JAB 2016).

With TNCs strategizing to improve their position for growth and profit, the structure and ownership of coffee companies and their brands have been shifting dramatically in recent years. These ongoing shifts create challenges for consumers and researchers to figure out who owns what. It becomes even more difficult to track the complex connectivity among actors across the stages of coffee production, processing, distribution, and consumption. The evident consolidation of TNC control over major retail and specialty brands, as well as many coffee shop chains, means that the appearance of consumer choice obscures the behind-the-scenes control by just a few companies. These TNCs have gained power to limit prices paid to producers, manage the commodity chain, and set prices of coffee sold to consumers.

### Theoretical Integration for Examining Coffee Meanings and Values

Each of these theoretical approaches helps interpret the meanings and popularity of coffee in modern society, and how they vary across classes. Consider espresso drinks, which appear to carry the highest social prestige among various ways to prepare coffee. It requires special machinery and training to create a perfect shot of espresso, a fine latté, or a cappuccino. Lévi-Strauss (1983) would not be surprised. He pointed out that different social meanings map consistently to different types of food preparation: the high-prestige activities involve greater patience, more complex technology and resources, or greater skill to carry out well, which is true of espresso. Following Bourdieu (1984), we would expect that people who drink the higher-prestige and more expensive coffee are more likely to be people from privileged social classes. Research surveys indeed reveal that consumers with higher incomes drink specialty coffees more frequently than lower-income consumers. People who prefer espresso drinks may also be perceived as more ambitious or wealthy than those who drink regular coffee. Thus coffee can be a marker of socioeconomic class in that people from other classes may identify espresso with a higher class, and members of higher classes can choose to reaffirm their social class by conforming to preferences for specialty coffees. It would be difficult for working-class coffee drinkers to spend the extra money to buy specialty coffee on a regular basis, and if they have never been exposed to the information that bird-friendly coffee supports biodiversity conservation, for example, how will they evaluate or justify the higher cost of the coffee? Indeed, a regular coffee blend of a major label, such as Folgers or Maxwell House, may be preferred because it is familiar, reliable, reasonably priced for the household budget, and consumed among friends and associates.

Yet a shot of espresso or a cappuccino is within the economic grasp of the general population, at least as a special treat. People who are not members of the more privileged classes may choose to consume these drinks not only out of enjoyment, but also to appear affluent, discriminating, or tasteful. They can, for a brief period, indulge themselves in an experience associated with wealth. Similarly, people of wealth may choose regular, filtered coffee to signal humility, lack of pretension, modest origins, or genuine class-inspired preferences that eschew the indulgences of espresso. The choice of coffee can thus signal membership in or identification with a social class, but it can also be used to transcend, contradict, or undermine social-class divisions. The malleability of coffee to send many messages is part of what makes it appealing to people of many social backgrounds.

Similarly, theoretical examinations of connectivity help illuminate the emergence of fair trade coffee. In recent decades, the experiences of coffee producers have been disseminated through films (e.g., *Black Gold, Caffeinated*), news releases, and scholarly publications. The information, itself a product of global connections, has encouraged people to consider where coffee comes from, how it reaches our cups, and the environmental and social consequences of commodity chains. It was through awareness of the difficult situations faced by coffee farmers that consumers in Europe and the USA developed fair trade coffee. The obscure connections between northern consumers and tropical producers became more apparent with the development of fair trade as an alternative to the standard commodity chain. Producers' perceptions of their ties to consumers also became clearer, and many participate in fair trade and environmental certifications to meet what they perceive as consumer preferences. Yet both sides face challenges from TNCs, and have experienced disappointments and difficulties in their distanced relationships with each other and the global coffee market system.

Considering theoretical approaches to food reveals that each one helps us understand certain aspects of coffee. No single theory explains all of coffee's multifaceted meanings, values, and purposes in social life and global relationships. While these theories interpret the contexts in which social meanings and values emerge, they do not answer a key puzzle regarding coffee: Why is coffee one of the world's most valuable and popular commodities? We find no simple answers, but we gain insights by considering the role of the USA and its relationship with coffee.

## Questions for Reading, Reflection, and Debate

1. What foods do you consider to be high prestige? Low prestige? Why? How do the theories of Lévi-Strauss and Bourdieu prove helpful (or not) for classifying foods?
2. In what ways might Lévi-Strauss's classification system be problematic? What foods might be hard to fit within the classification system of raw, cooked, or rotten?
3. What is the most disgusting thing that you have ever been given to eat? What did you do? Why?
4. What foods do you prefer? In what ways do your preferences differ from your friends or other students? Explain whether these differences relate to your socioeconomic background or other factors.
5. How do your favorite or frequently consumed foods depend on global connections and commodity chains? Where is your favorite food produced, and what company (or companies) is involved in processing and distributing it?

# 3

# COFFEE CULTURE, HISTORY, AND MEDIA IN COCA-COLA LAND

*It's 8:35 a.m. this Monday morning, and the line at the Starbucks across from the Indiana University campus spills onto the sidewalk. Walking by, I estimate that at least 20 people are waiting for their coffee, nearly all of them professors, students, or administrative staff. I'm headed to the next block, where the Bloomington Bagel Company serves great coffee from a local, socially conscientious roaster. But the line there is at least as long; it draws almost as many morning customers as Starbucks due to its fresh-baked bagels and muffins. I don't have time to wait in a long line, and if I don't get my coffee soon, I'll have to run to my first meeting without it. I hate the thought of starting my day without coffee. But I have the choice of three other independent coffee shops and Dunkin' Donuts within a two-block radius. Which one, I wonder, will be quickest? The answer comes to me—I'll go to Soma, the only coffee shop with a line of self-serve thermoses, filled every 15 minutes with fresh-brewed, fair trade coffee. Even with a line, it won't take long. I go by a delicatessen on my way; it's crowded with people eating breakfast and drinking coffee from mugs. Jogging now, I cross the street, turn the corner, and duck into Soma. The line moves quickly; in less than 7 minutes I have paid for my coffee and filled my cup. On the way to the meeting, I pass the Dunkin' Donuts and another line of likely coffee drinkers. I may be a few minutes late for my 9 a.m. meeting. That's okay; I have my coffee, and a few others may be late for the same reason. Going by the number of busy coffee shops, some might think the campus runs on coffee. Maybe it's true.*

Like most other adults in the USA, I drink coffee. We are the reason that the USA is the world's largest coffee consumer, representing about 20 percent of the world's total coffee intake. We are a nation of caffeine, fast food, coffee shops, and life lived too often at an unrelenting 24-hour-a-day pace. Recent research finds that 83 percent of the USA's adult population drink coffee (*Food Manufacturing* 2013), and 61 percent drink it every day (Nicholson 2014). On average, US coffee drinkers consume about three cups of coffee each day, but we don't come close to the Finns, who are the world's most avid coffee drinkers, consuming from four to ten cups daily (Ojaniemi 2010; Statista 2016; Tufts University 2008). But Finland represents a small proportion of the world's population, and the USA is the world's third most populous country. Moreover, the USA has the world's highest gross domestic product, and it is a global trade giant. The question "Why is coffee one of the world's most popular beverages?" needs to acknowledge simple demographic and economic realities: the USA's combination of wealth, trading power, and fondness for coffee have made an important contribution to coffee's global importance. But the story isn't that straightforward. The USA is one of the world's largest consumers of all beverages (*Foodnavigator.com* 2003). Coffee competes for consumer preference against tea, carbonated soft drinks, energy drinks, and a smorgasbord of health drinks, juices, milk, and bottled water, not to mention beer, wine, and spirits. Why then did coffee become important in the USA? And how has it maintained its position in a highly competitive beverage market?

## A Brief History of Coffee in the USA

Coffee consumption in the USA stretches back to the seventeenth century, but the emergence of the coffee habit and its integration into daily life occurred gradually. In the colonial period, tea was at least as popular as coffee. American preference for coffee over tea emerged through specific historical events leading up to the Revolutionary War (Chapter 7), but it endures because of economic processes, political decisions, and trade connections that tied the USA to coffee-growing countries in Latin America, especially Brazil. Moreover, national identity and patriotism became linked to coffee drinking (Topik and McDonald 2013). In 1830, per capita coffee consumption stood at 3 pounds per year and was associated with society's elite (Roseberry 1996). In the next 100 years, global production expanded, prices dropped, and roasting technology improved greatly. Through the mid-nineteenth century, farmers and workers became coffee drinkers, even though the traditional method of coffee preparation (boiling coffee grounds in water) often resulted in a bitter taste. This problem was solved when a German housewife, Frau Melitta Benz, invented the drip filter-brewing method in 1908. The method spread rapidly to the Americas where it quickly gained popularity (Weinberg and Bealer 2002). By 1930, coffee drinking had become common throughout society, and annual coffee consumption had increased to around 10 pounds per capita. This transition took place in association with the expansion of industrial production and a determined promotional effort by the US coffee lobby. In 1921, the Joint Coffee Publicity Committee conducted an ad campaign that advised customers to drink coffee to restore energy when they felt tired in late morning or afternoon. The coffee lobby financed studies on coffee's effects on alertness, and distributed results showing that coffee consumption helped maintain productivity. That same initiative helped businesses set up coffee stations, and coffee breaks became part of the workday (Jiménez 1995a). The coffee lobby also promoted the integration of coffee drinking into everyday home life through a home economics service, which advised housewives on how to prepare coffee to keep their husbands happy. In the same interval, instant coffee became available, and new forms of coffee consumption such as iced and flavored concoctions emerged.

### Coffee in Daily American Life

By the mid-twentieth century, coffee had deep cultural and historical roots in American society, and was part of American enculturation. From a young age, most children observe adults drinking coffee, or see it being served at public events. Curious children may beg to sample it, because American society believes coffee is for adults (unlike a number of other societies, which offer coffee to children). Coffee is omnipresent in daily life. At breakfast, waitresses serve coffee as they hand out menus. Nearly all business offices have coffee pots to serve clients and provide for employees. Students studying for tests and people working night shifts or facing deadlines turn to coffee and other caffeinated beverages to stay awake. Sitting on a table, accompanied by bowls of sugar and powdered creamer or a pitcher of milk, the coffee pot occupies a prominent location at club meetings, church potlucks, weddings, funerals, and special events.

### Coffee in the Media: Ads, Slogans, and Social Values

As indicated, the media has played a role in shaping coffee consumption and perceptions of coffee. From the dissemination of medical studies of coffee to advertisements and slogans designed by industrial psychologists and marketing experts, consumers encounter information and representations of coffee that are often aimed to invoke a reaction: to drink a certain brand, or to consume more (or less) coffee. At the same time, consumers have been active agents by embracing or resisting media promotions, and at times pressuring companies to make changes in their products through open dislike or opposition, or ignoring a product. For example, New Coke—which vanished quickly after a hugely promoted introduction in 1985—remains infamous in the marketing industry as one of the greatest flops of all time (*DailyFinance* 2016). In hopes of counteracting PepsiCo's growth, the Coca-Cola company produced the new formula but neglected to consult its consumers, who passionately disliked it. Soon the company reintroduced the original Coca-Cola as "Classic Coke."

Ad campaigns can draw on social values and established preferences to try to sell goods by association. Examples of ad campaigns for Colombian coffee, Taster's Choice/Nescafé Gold Blend (depending on the market), and Folgers illustrate some of the approaches intended to gain loyal customers and a broader market share. Colombia has long enjoyed a reputation as a producer of fine coffee. Its fame was so early and prominent that its coffee gave the name "Colombian Milds" to an entire category of coffee traded on international markets. The nation has struggled, however, to maintain its market share in the face of competition from quality niche coffees, and less expensive coffees from Brazil, Central America, and East Africa. During the 1990s, the Colombian coffee lobby designed a new ad campaign to disseminate the slogan "Grab Life by the Beans." Playing off a well-known American slang phrase, the Colombian ads featured athletes risking their lives as they skied off glaciers, surfed through monster waves, and climbed mountain peaks. The ads aimed explicitly to attract young adults to drink more coffee, because coffee consumption had slumped in the 18–30 age group as caffeinated soft drinks gained popularity. The ads received favorable attention, but it is not clear how much difference the ads made in encouraging more people to try Colombian coffee.

A similar situation occurred for the instant coffee Nescafé Gold Blend/Taster's Choice in a highly successful television promotion. It played upon American fascination with romance, and tried to attract young coffee drinkers by presenting the instant coffee as rich tasting, convenient, and sensual (Reichert 2003). A series of ads featured an attractive young woman and her equally attractive male neighbor, who gradually fell in love over successive, shared cups of the instant coffee. Although the ads achieved high recognition (perhaps the only ad campaign to rival serial soap operas), the company discovered that audiences cared more about watching the ads than increasing their consumption of Nescafé/Taster's Choice. Despite this and other efforts, instant coffees have yet to attain a reputation for matching the flavor of freshly brewed coffee.

Folgers became a successful brand by promoting its coffee as "Mountain Grown," and staking a claim to high quality. Through the 1960s and 1970s, a series of television ads presented Folgers as the answer to housewives' coffee-brewing shortcomings, and a way to encourage a happier married life. More recently, ads show Folgers coffee as an integral part of family life and fun social happenings. The company also promotes a variety of coffee types to appeal to a broad clientele. Maxwell House gained earlier and enduring recognition by wisely embracing the coffee slogan "Good to the Last Drop" in 1917. The phrase had been coined by President Theodore Roosevelt upon finishing a cup of coffee prepared by the Maxwell House Hotel of Nashville, Kentucky (Beyer 2007). To this day, it is one of the most famous and enduring slogans in US marketing. If you look closely at Folgers, Maxwell House, Taster's Choice, and other brands in grocery stores, you will find colorful words and slogans aimed to attract customers by creating impressions of quality and flavor.

During the late nineteenth century, soda waters became popular beverages throughout the USA. Soda fountains prepared dozens of flavored beverages, many of which carried health claims, and were generally confined to local markets (Pendergrast 2000). In some ways, soda fountains of the late nineteenth and early twentieth centuries were precursors to late-twentieth-century coffee shops as gathering places, but they never gained a global trajectory. Sodas presented a contrasting option to coffee, although coffee retained its predominance as a morning drink and for coffee breaks. Both beverages were inexpensive and available to all social classes.

In the 1960s, coffee consumption began a gradual decline. Coffee companies' ads promoted the quality and social relevance of their brands, but customers had begun to drift to alternative drinks. At this time, the major brand companies (Folgers, Maxwell House, Hills Brothers) and a few regional companies dominated coffee sales. Coffee had become a standardized product, and the average consumer couldn't taste any difference between the brands. In this context, companies began substituting arabica coffees with cheaper, bitter robusta coffee, at the cost of flavor and aroma (Roseberry 1996), believing that consumers would not notice the difference. As one scholar notes, they had begun a race to sell the cheapest coffee possible, while maintaining prices (T. Clark 2007). After all, they had very little competition. They left the door open for the independent roasters who had not been bought out and who, in the 1970s, started experimenting with high-quality beans, creating their own blends and selling fresh-roasted coffees. One of these small roasters opened in 1971 at Pike Place Market in Seattle under the name of Starbucks. It developed a faithful clientele, but remained a roasting shop until an ambitious entrepreneur, Howard Schultz, bought it in 1987 and dared to open a coffee shop (Starbucks 2016c). By that time, soft drinks had become a leading beverage class in the USA, and Coca-Cola had become a global symbol of American culture.

### Coca-Cola vs. Coffee

Soft drinks have been competing with coffee as sources of caffeine for over a century. In some ways soft drinks and coffee seem to be very different drinks. Soft drinks are sweet, bubbly, and best when served cold. Although Coca-Cola and many other sodas began as putatively healthful combinations of herbal and other natural extracts, most soft drinks today are artificially flavored. Coffee remains a natural product. It can be served hot or cold (would anyone drink Coca-Cola as a steaming hot beverage?) and prepared to fit individual preferences with or without sugar, milk, or other flavorings. By contrast, soft drinks are usually consumed without additives. Coca-Cola does not stand for much adulteration, aside from Coke floats and a few flavored versions (e.g., Cherry

Coke). But coffee, Coca-Cola, and other caffeinated beverages have played off the effects of caffeine as invigorating and uplifting.

During the twentieth century, coffee and soft drinks (especially Coca-Cola) fought to gain or maintain popularity with American consumers. In the process, soft drinks became the largest category of beverage consumed in the USA. Soft drinks as well as coffee transformed as consumer tastes evolved and markets became more global. The growth of Starbucks and purveyors of specialty coffees have "decommoditized" coffee; it is no longer a single, identifiable good but many unique goods, which may take on different meanings and associations. Consumers have lessened reliance on major coffee brands in a widely and wildly diversified market. While Coca-Cola has diversified by adding other beverages to its product line, it has defended vigorously the integrity of its name and reputation, and prosecuted any attempt to infringe upon it. Although Starbucks defends its name, it is known for coffee shops more than as a brand of coffee.

In 2006, Coca-Cola attempted to appropriate part of the coffee market by introducing Coca-Cola Blāk, a coffee-flavored Coca-Cola beverage. Introduced first in France (Wentz and Mussey 2006), the 2007 attempt to introduce it in the USA proved a fiasco. When journalist Anderson Cooper tasted it on a national television broadcast, he spat it out (YouTube has clips of this famous media moment, and other clips show people praising or vilifying the beverage). Coca-Cola discontinued the product in August 2007 (Stanford 2007). Evidently, coffee-flavored Coke could not replace the real thing.

Undeniably the preeminent American soft drink, Coca-Cola became a national and global success through a combination of strategic marketing, wise (and not so wise) business decisions, and luck. It has been called the most recognizable American product in the world, reaching more countries than the United Nations (Pendergrast 2000). Coca-Cola originated in the USA and, therefore, could represent itself as something uniquely and especially American. Invented by John Pemberton in 1886, and acquired by Asa Candler through dubious means, Coca-Cola spread through aggressive and clever advertising. Early on, Coca-Cola presented itself as eminently American and democratic in its availability to all classes. The company has repeatedly identified itself with "The American Way of Life" (Weiner 2002). "Coke Is the Real Thing" implied not only the authenticity of the product but American values of honesty, openness, and good value, while defying the possibility that any competitor could measure up (as Pepsi gained market share).

When the USA entered World War II, Coca-Cola arranged with the US military to develop bottling centers and supply lines wherever the soldiers went. The soldiers also carried instant coffee. This strategic intertwining of corporate and national interests meant that the US government tacitly supported Coca-Cola's global expansion, and gave Coca-Cola a near monopoly with US soldiers. By the end of World War II, Coca-Cola and instant coffee had become synonymous with the USA in the minds of US soldiers and their international allies (Mintz 1996; Weiner 2002). In the postwar years, both products experienced global growth, in part because of the products' positive associations built during the war years. But ironically, the same thing happened in Axis countries, because the Coca-Cola bottling company in Germany successfully presented itself as inherently German during the war. One of Coca-Cola's great claims is that it becomes "local" wherever it goes (Pendergrast 2000). But in the ironies of global interconnections, the identification with American values that enhance Coke's popularity has simultaneously made it a lightning rod for those who oppose the downsides of American adherence to unconstrained capitalism, materialism, and individualism. Starbucks has excited similar sentiments. Each company has been vilified locally as a global interloper and globally as a threat to local traditions and cultural coherence.

Anthropological studies of Coca-Cola and other products have found that despite the risks that Coca-Cola poses for local communities, it can also affirm culture and community, or be used in novel ways (Foster 2008). For example, Coca-Cola became linked to the American Civil Rights Movement in the minds of young blacks when they were denied the right to buy a Coke at soda fountains. The experience resonated as a clear violation of their rights, because they had been refused something that belonged to every American (Weiner 2002). As this example illustrates, symbolic and practical dimensions of commodities can take on multiple meanings and interpretations as individuals and groups incorporate them into their lives.

The competition between coffee and soft drinks in the USA may have strengthened both. The American beverage market has grown considerably, because Americans are drinking more beverages now than in the past. Compared to most other countries, Americans consume more beverages and a greater variety (Fletcher 2006; Mintel 2009). In the minds of consumers, the choices of coffee, Coke, or other beverages may not mean sacrificing one for another, but a question of what to drink when.

Consumers have also demonstrated a power to sway the practices of global corporations. Following critical publicity on its business practices, environmental impacts, and health ramifications, Coca-Cola has waged a public relations campaign to cast itself as a good corporate citizen. The company recently announced an expanded parental leave policy for its US employees; qualifying parents will receive a six-week leave regardless of gender or sexual orientation (Moye 2016), but the policy excludes employees covered by collective bargaining agreements (Bellstrom 2016). Its "Giving Back" webpage (www.coca-colacompany.com/giving-back/) declares that 1 percent of its profits are donated to communities and shows examples from around the world. Moreover, consumer concerns for social justice and environmental sustainability have compelled Starbucks and Kraft (holder of Maxwell House) to adopt corporate responsibility stances that include purchasing some fair trade coffee.

The slipping prestige that coffee suffered between 1960 and the 1990s appears to have reversed. Today, coffee drinkers can choose fair trade, organic, and shade-grown coffees because they appreciate high-quality coffee. Or they might be willing to spend a bit more as a way of showing solidarity with coffee growers, countering some of the inequities of the profit-driven global economy, and supporting environmental sustainability (Jaffee 2007). "Yuppies" who favor gourmet coffee may also be longing for a more genteel past, before mass consumption, and endeavoring to reconstruct a more wholesome era by favoring whole-bean coffees, gourmet shops featuring antique coffee grinders, and diversity in coffee varietals and roasts (Roseberry 1996). Choosing fair trade or other specialty coffees can symbolize resistance to the dominant society. Within punk culture, the choice of fair trade and organic coffee symbolized opposition to capitalism, and rejection of a society characterized by profound social inequities (D. Clark 2004). In the past 20 years, fair trade and specialty coffees have become the fastest-growing segment of the global coffee market (see Chapters 17 and 18). The success of these coffees in many niche markets reflects associations with social values and meanings held dear by people across a range of social groups and political perspectives. Moreover, the diversification in coffee markets allows better-off coffee drinkers to assert class differences and privileged taste by purchasing higher-priced, gourmet coffees (Fridell 2007)—as Bourdieu would have anticipated. The growth of specialty coffees is also related to the growth of global networks and connections that create relationships among people who probably will never meet each other.

### Questions for Reading, Reflection, and Debate

1. Do you drink coffee? Why or why not? If you don't drink coffee but you do drink other caffeinated beverages, why?
2. Has a slogan or an advertisement ever convinced you to try a new drink or food? Why or why not?
3. What does Coca-Cola mean to you? What does coffee mean to you?
4. Why is Coca-Cola a controversial product around the world? What do the controversies have to do with American ideals of democracy, citizenship, and "the American Way of Life"?

## 4

# TRACING COFFEE CONNECTIONS

> *It's a Saturday morning in July at the Bloomington Farmers' Market. I am standing in front of Nick's specialty coffee stand, trying to make a decision. In addition to a selection of brewed coffees and espresso, Nick offers a variety of fresh-roasted coffee beans from around the world. Today he has coffee sourced from 16 countries across Southeast Asia, Africa, and Latin America. Each coffee has a special aroma and unique flavors that result from the combination of soils, microclimate, and processing treatment in the region of origin. I want to buy a pound of coffee to prepare at home for the coming week, but which should I select? Do I want to enjoy the rich, earthy flavors of dark-roasted Sumatran coffee? Or the fruity, complex flavors of coffee from Ethiopia, where each region imparts a distinctive flavor profile? Or perhaps today I'll go with a bright, citrusy Costa Rican coffee? Then I spot bags marked "Peru." It's been a while since I tasted Peruvian coffee; I buy a pound. Then I serve myself a cup of dark-roasted java from the thermoses of brewed coffees. Sipping my coffee, I join other market-goers, many like me, carrying a coffee cup from stall to stall, looking for the juiciest peaches, freshest lettuce, and ripest tomatoes.*

It is easy to accept without question the amazing selection of coffees from all over the world available to us in a small North American city (Figure 4.1). A fundamental conundrum of food consumption is that food is utterly necessary to survival, yet it is taken for granted (Mintz 2002). In the USA, it is easy to be oblivious to the hows and whats of our food. In part, our lives have become so full and complex that we do not feel there is time or need to think of food beyond its packaging and how efficiently we can prepare it. We also have been encouraged to ignore the background and origins of food by business conglomerates that process and distribute our food (Belasco 2002). When people do not know or care about food origins, businesses can acquire and transform food with little attention to health concerns, human rights, or environmental sustainability. Coffee is no different. The processes by which coffee reaches our lips can remain invisible; we do not have to think about the manufacture of agrochemicals, the backbreaking labor of weeding the plants and picking

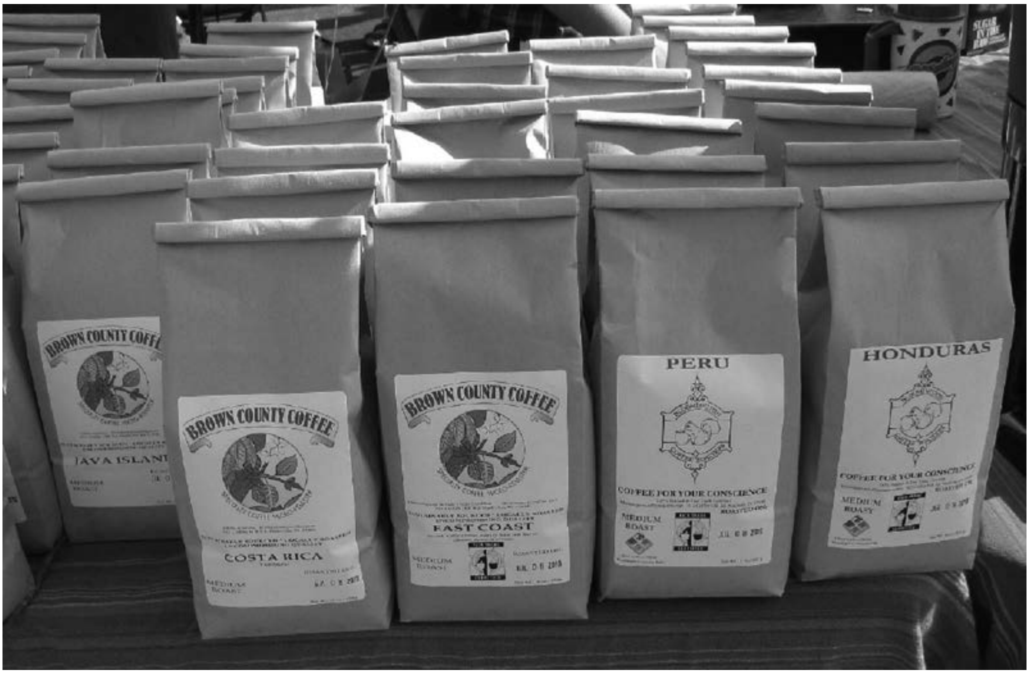

*Figure 4.1* **Bags of coffee** (Source: Catherine M. Tucker).

the cherries (coffee fruit) for wages measured in pennies, the gallons of water needed to clean the beans, or the tanks of gasoline used to transport them to the next stage in their global voyage.

Why is it possible to buy coffee from all over the world in a place where coffee does not grow? We know that global market arrangements make it possible, but how does it work, and what happens on the way? By asking these questions, we further consider how global connections influence coffee production. We start by considering the technological and natural resources needed to produce coffee and bring it to our tables. The discussion then looks at some of the social, symbolic, and economic connections and relationships associated with coffee (Parts III and IV provide more details on these aspects in relation to producing and processing coffee and political–economic arenas, respectively). While certain linkages tie the world together, coffee is also a commodity separated from its origins, and linked to global disparities and struggles. All of these elements contribute to understanding the social, economic, and environmental dimensions of coffee production and consumption.

### Linkages to Global Industrial Production of Chemical Inputs

The production of coffee depends on diverse inputs, equipment, and infrastructure whose origins span the globe. Behind each good is a manufacturing process that has exploited natural resources (often unsustainably), encompassed successive stages of transformation and transportation, and generated waste and pollution. Conventional coffee growers depend on internationally manufactured agrochemicals to produce their coffee. Coffee plants require fertile soils and can deplete key nutrients rapidly; therefore most coffee producers rely on synthetic (inorganic) fertilizers to ensure soil fertility. The most important components in inorganic fertilizers are nitrogen, phosphorus (as phosphate), and potassium; fertilizers for coffee plants usually contain all three elements. Nitrogen for synthetic fertilizers must be captured from the atmosphere and transformed into a solid form, usually as anhydrous ammonia. Factories manufacture anhydrous ammonia through a chemical reaction that uses natural gas (Funderburg 2001); China, Russia, India, and the USA are the world's largest producers (USGS 2016:118). Phosphate and potassium are mined in far-flung regions of the world. Phosphate is extracted from dwindling reserves in China, Morocco, and the Sahara. Potash provides the main source of potassium; most is mined in reserves located in North America, Europe, and the former Soviet Union (IPNI 2009). The mining operations typically clear the natural vegetation and release contaminants into water and soils. Thereafter the potash, phosphate, and anhydrous ammonia must be shipped by land and sea to manufacturing plants, principally in North America, Germany, and Chile (ETC Group 2008). The factories combine the elements into fertilizer, which is shipped to coffee-producing countries around the world, and transported by vehicles to locales where coffee farmers can buy it.

Many coffee farmers, particularly those with sun-grown plantations, apply pesticides, herbicides, and fungicides. The world's major agrochemical companies manufacture these products in the industrial nations of the Global North and Southeast Asia. Production of these agrochemicals involves petroleum by-products, and generates toxic wastes that factories release into the air and water. Similar to fertilizers, pesticides and related agrochemicals must be shipped internationally in petroleum-fueled vessels and vehicles to reach coffee plantations. The petroleum used in agrochemicals and as fuel is extracted from one of the world's 4,000 oil fields, perhaps in Saudi Arabia, Kuwait, Nigeria, Venezuela, or Russia, and transported to a refinery. The world's largest oil refineries are located in India, Venezuela, South Korea, Saudi Arabia, and the USA (Helman 2010). All stages of petroleum extraction, refinement, and processing generate pollution and by-products with problematic consequences for the environment (Islam *et al.* 2007). Some of the world's worst environmental disasters have resulted from petroleum production (for example, the British Petroleum disaster in the Gulf of Mexico in 2010) (Ladd 2012) and pesticide fabrication (for example, the 1984 Bhopal disaster in India) (Broughton 2005). By the time fertilizers, pesticides, and other chemical inputs reach a coffee farm, they have incorporated labor, technology, transportation, and fuel drawn from three or more continents, and generated trails of waste, environmental damage, and greenhouse gas emissions along the way.

## Production and Processing from the Plantation to the End Consumer

Coffee plantations begin with clearing forests, with implications for biodiversity, soil erosion, watersheds, and climate change. Then farmers must purchase seeds or seedlings. Depending on a farmer's financial resources and national technical assistance for coffee production, the seeds may be acquired from existing plants, or purchased as improved hybrids from national coffee institutes or agribusinesses. Successful coffee production requires a suitable natural environment, adequate inputs of organic or chemical additives, and labor to care for and harvest the plantations. Coffee laborers are among the most poorly paid workers on the planet, earning cents per hour for demanding and sometimes dangerous work. On conventional plantations, they typically apply agrochemicals several times per year to improve yields and fend off pests and diseases. In Honduras, a sample hectare of coffee that was planted with leguminous (nitrogen-fixing) shade trees produced well with 80 kg of nitrogen, 40–60 kg of phosphorus ($P_2O_5$), and 90 kg of potassium ($KO_2$) (IHCAFE 2001). A sun-grown plantation that did not have nitrogen-fixing shade trees would need more nitrogen.

Pesticides may be applied on a schedule or as needed when an infestation is discovered. Common pesticides used on coffee plantations in Latin America include Furadan, Diazinon, Di-Syston, and Thiodan. Furadan is reported to have the highest acute toxicity for humans of the commonly used pesticides; one-quarter of a teaspoon (1 ml) can be fatal for humans, and a single grain will kill a bird. It is used widely on soybeans in the USA (FMC Corporation 2009; Harrison 2006). Diazinon and Di-Syston are both listed on the EPA's restricted pesticide list. Di-Syston and Thiodan can be fatal to humans if inhaled, swallowed, or absorbed through the skin. All of the chemicals are highly toxic to marine life, birds, and animals (Bayer Crop Science 2010; EPA 2008). Warning labels on the pesticides advise that protective clothing and masks be worn. However, coffee farmers and workers rarely have protective clothing. Pesticide use is associated with illnesses among workers, soil and water contamination, and pesticide residues in green coffee beans (Rice and Ward 1996; Ryan and Durning 1997).

Organic coffee growers avoid the costs and dangers of agrochemicals, but to maintain soil fertility, they need to make and apply organic fertilizers such as composted matter, manure, and mulch. Organic methods help protect workers and the environment but require more labor and attention to individual coffee plants than applying chemicals.

Once harvested, processing must begin immediately, or the beans will spoil. Typically, a coffee-hulling machine removes the cherries around the coffee bean by mechanical stripping and washing with water, followed by rinsing and soaking in more water. The water becomes contaminated with the decomposing juice and matter from the cherries, which pollutes water when it runs off into streams. The processing equipment (for hulling, cleaning, sorting, and drying the beans) is made of steel and other industrial components. The iron ore and bituminous coal (or other carbon source) used to make steel must be mined. Major iron and coal mines are found in Sweden, Australia, Brazil, India, Russia, and the USA. The mining and processing of these minerals pollute water and produce waste by-products that are difficult to dispose of safely. The steel must be shipped to the factories that manufacture the processing equipment, and then the equipment needs to be shipped to the place where it is needed. Most coffee-producing countries import machinery for processing coffee. Brazil, Colombia, Mexico, and India, however, have become known for manufacturing coffee-processing equipment for national use and export. The equipment operates with motors that run on natural gas or petroleum-based fuels, except for drying kilns, which often burn firewood cut from remaining forests. Getting that delicious cup of coffee to our tables is not necessarily a safe or environment-friendly process.

Most exported coffee ends up in 60-kg (132-lb) bags for international shipment in large, ocean-going container ships. Green coffee beans can be easily transported, and store well for extended periods when kept dry and cool. Ease of transportation has contributed to the worldwide adoption of coffee. Arriving in the USA or Europe (the major importers), the green coffee beans are transported by truck to roasting facilities. Beans undergo roasting at temperatures up to 470°F (using natural gas or electricity—another set of production networks and associated emissions) for about 13 minutes, depending on the desired darkness of the roast, the quality of the bean, and preferences of the roaster (Sweet Maria's Coffee 2010). The most popular method of packaging freshly roasted coffee is in a vacuum-pack bag, composed of polyethylene, nylon, aluminum foil, and polyester (Ryan and Durning 1997). It will maintain freshness better than other options. Trucks or trains carry packaged coffee to local distributors and grocery stores, where most coffee drinkers buy coffee for home consumption. Home consumption depends on coffee makers while coffee shops use specialized equipment and serve disposable cups, each the result of commodity chains with further environmental consequences (see Chapter 9 on consumer waste). By the time coffee reaches the cup, it has involved an international host of businesses and products, uncounted actors, and transportation across oceans and multiple countries. More details on the actors and processes of the commodity chain appear in Chapter 16.

### Conundrums of Food Knowledge and Representations

The reality of coffee's origins contrasts with typical media representations of coffee-producing countries. Travelogues, advertisements, and photographs splashed on coffee packages show beautiful photos and descriptions of the indigenous and traditional peoples who constitute the majority of the world's smallholder coffee producers. We find it easy to imagine a paradise where people live close to nature and free from urban stresses. One author describes a Guatemalan coffee plantation:

> The farm is almost intolerably beautiful, covered with the green glossy leaves of the coffee trees, prehistoric tree ferns and Spanish daggers along the roadside (to prevent erosion), rolling hills, invisible harvesters singing and calling to one another, laughter of children, birds chirruping, clouds rolling over tops of hills, big shade trees dappling hillsides, springs and streams.
>
> (Pendergrast 1999:xii)

The description juxtaposes the plantation's "intolerable beauty" with the incessant labor of the workers, who appear as happy, healthy, and unbowed by their toil. Coffee-producing regions may have some of the most beautiful landscapes on the planet, but coffee pickers imagine another version of paradise away from the exhausting work that fills their hours, days, and years. After living in and visiting coffee-producing communities across two decades, I cannot count the times that people have asked me about my country, and asked how to obtain a visa. They hope for a place where work is easy, wages are high, and food is abundant. Coffee drinkers' imaginings of tropical plantations inhabited by happy workers contrast with coffee pickers' dreams of shining cities and pockets full of cash. It seems in all corners of the world, we want to believe that the "grass is greener" and life is better on the "other side." It is hard to conceive of the transformed perceptions that come with experiencing the other side, when stunning green mountainsides reveal grinding poverty, and awe-inspiring cityscapes expose grime, pollution, and inequality.

## Physical, Symbolic, and Economic Dimensions of Coffee Connections

The discussion of global linkages above points out that coffee (and many other foods) carries unseen economic and environmental ramifications that are difficult to conceptualize or quantify. The connections go even further. We are linked physically, symbolically, and economically through the production, distribution, and consumption of coffee. Physically, as we imbibe coffee or bite into a coffee-flavored confection, we ingest the nutrients and qualities of flavor imparted to the bean from the soil and water with which it grew. We consume a part of another place as we ingest coffee. We benefit viscerally from lands and people whose labor brings us the chance to appreciate coffee's unique flavor. We can be sure, when we taste coffee in drinks, ice cream, and confections, that it is truly coffee. Chemists have not yet been able to create a convincing imitation coffee flavor without using coffee derivatives (Pendergrast 1999). Even if we do not drink coffee, we are likely to catch its aroma as we go about our daily lives.

Symbolically, associations with and cultural meanings for coffee are manifested in ritual practices. Rituals are "any fixed or stereotyped practice, behavioral pattern, or embellishment that has no evident instrumental purpose beyond communication or symbolization" (Winzeler 2008:146). Coffee is among the many foods that have ritualistic behaviors associated with their preparation and serving, because social groups develop beliefs about "right" and "wrong" ways to do things. Certain steps are necessary to make coffee, such as grinding the beans and combining the grounds with hot water, but people have added symbolic and meaningful dimensions. For example, a traditional Ethiopian coffee ceremony affirms and symbolizes friendship. Guests sit at a table, and the hostess roasts green beans in front of them. Then the hostess passes the roasted beans around so everyone can appreciate the aroma. A brief statement in honor of friendship is offered, then the hostess grinds the beans by hand in a stone mortar and brews them in a pot. The full ceremony lasts over an hour because the process is repeated three times, known as *abole–berke–sostga* (one–two–three) (Allen 1999:3).

Economically, consumer willingness to drink coffee drives the commodity chain. If so many people did not make coffee a part of their daily lives, farmers would not grow it, and businesses and entrepreneurs would not buy, transport, process, and distribute it. The global coffee system has grown and expanded its reach as producing countries have aimed to increase exports through greater area planted in coffee, adoption of high-productivity hybrids, agrochemical use, and technical advances. Coffee entrepreneurs and businesses have made concentrated efforts to convince the general population to consume more, and consumers and societies, for their own reasons, have continued to drink coffee or increased their consumption. Consumers have been particularly successful in communicating their interest in specialty coffees, and coffees that carry social and environmental advantages. Demand for specialty coffees has grown while consumption of major brands has stagnated. Even so, large companies have reported record profits from coffee sales. In the process, the proportion of profits retained by producing nations has fallen substantially in the past 20 years. Coffee producers have struggled to gain a fair share of the profits from their coffee, and countries that depend on income from coffee sometimes find it difficult to benefit from the fame of their coffee, or even to protect rights to the names and characteristics that distinguish their products.

Ethiopia's struggle to protect the intellectual property rights to the names of its coffee-producing regions provides a case in point. Ethiopia is among the world's most impoverished and strife-torn nations; 37 percent of its population earns less than $1.25 per day (OPHI 2016). Coffee represents 40 percent to 60 percent of its export earnings and 15 million Ethiopians work in various stages of production and trade. In 2005, the Ethiopian government applied to trademark the names of its major coffee-producing regions, Harrar, Yirgacheffe, and Sidamo; each is famed on international markets for unique flavor characteristics. To the government's surprise, the US patent office refused Ethiopia's application to trademark Sidamo because Starbucks already had applied for it. Starbucks had been working with coffee cooperatives in Ethiopia for almost three decades to improve quality, and asserted that the trademark would benefit farmers as well as the company (Fellner 2008). The ensuing legal and public-relations battles raised serious questions about the rights of TNCs to acquire and market not only products but names of places, as well as the role of national governments in marketing. The government argued that a national trademark would boost the country's much-needed revenues from trade and improve conditions for farmers. Starbucks argued that it would be a better partner for farmers than the struggling government, and resisted pressure to withdraw its trademark application. While some consumers supported Starbucks, many others pressured Starbucks to desist in its patent claim. Efforts to sway public opinion and the media ensued among Starbucks, Ethiopia, nongovernment organizations (particularly Oxfam), and consumer interest groups. In the meantime, Starbucks' carefully managed image of good corporate citizenship took a hit. Eventually Starbucks withdrew its claim for Sidamo, opening the door for Ethiopia to resubmit its application. The US Patent and Trademark Office granted Ethiopia the Yirgacheffe trademark in 2007, apparently the first country to trademark a coffee (Faris 2007). The case gives insight to how complex connectivities can play out among multiple actors on international and national stages. Ethiopian coffee farmers were largely excluded from the international political drama, and it remains unclear whether they are benefiting.

### Coffee and Fetishism of Commodities

Through systems of production and distribution, our choices of food can transform the Earth, and may degrade or conserve the soil and water upon which we depend for sustenance. One result of the modern agroindustrial complex has been to separate people from food production. Many things that we consume, including coffee, come prepared and packaged in ways that utterly disguise or contain very little of its original form. A package of hamburger carries no element that implies a cow; a can of ground coffee represents nothing of the bush and cherry of its origins. Some prepared foodstuffs have more to do with laboratory processes and chemical additives than agricultural fields and pastures (Pollan 2008). Marx (1978:319–329) described this profound separation of the consumer from the producer, and the utter transformation of a final product from the original form, as “fetishism of commodities.” When coffee drinkers consume their brew without knowledge or concern for its origins, they deny their connections to any troubling truth of how it came to their table. Because coffee is produced far away from the majority of its consumers, it is particularly vulnerable to these separations. But the growth in fair trade and specialty coffees is an attempt to reconnect consumers with producers. The Slow Food and local food movements that have spread through Europe, the USA, Canada, and Japan in recent years foster consumer awareness that they have lost ties with the origins of their food. This awareness has triggered a commitment to rebuild those linkages. The efforts present a challenge to the dominance of impersonal global markets, and have created opportunities to renegotiate the culturally specific and globally relevant significance of coffee and many other foods.

Coffee’s popularity in the present can be attributed to many factors, such as its social and symbolic utility, its economic value and political importance, and its adoption as a preferred beverage across many groups and societies. But all of these factors need to be understood in relationship to complex connectivities that shape the flows of goods and communications, and how they emerged with the evolution of the global economic system. While the origins of coffee preceded the development of the modern world system, the use of coffee as a beverage emerged not long before European vessels began exploring the globe. Thereafter, the history of coffee becomes inseparable from the history of colonialism, imperialism, and the rise of global capitalism. To comprehend the importance of coffee today, we must explore its history.

### Questions for Reading, Reflection, and Debate

1. Do you have any daily rituals or ritualistic practices? How would you feel if you did not do them as usual?
2. Besides coffee, what other common commodities that are not produced within the USA do you use frequently? Do you have any favorite foods that are originally from other countries?
3. What are some of the ways that coffee ties the world together?
4. What aspects of coffee's global linkages create problems? In your opinion, which problems are most serious? What opportunities do you think exist for resolving these problems?

# 5

# COFFEE AND THE RISE OF THE WORLD SYSTEM

> That cup of coffee you sip at your breakfast table, desk, or café comes from far away. It was grown in Brazil, Colombia, Vietnam, the Ivory Coast, or one of a hundred other coffee-producing lands on five continents. It is a palpable and long-standing manifestation of globalization. For 500 years coffee has been grown in tropical countries for consumption in temperate regions, linking peoples of different lands and continents by trade, investment, immigration, conquest, and cultural and religious diffusion. There is a world of history in your cup.
>
> Clarence-Smith and Topik 2003:1

For many of us, the study of history appears to be unconnected to the experiences and pressures of our lives. It can be easy to ignore that many of the ideas, spatial arrangements (roads, buildings, cities), and material items in our daily existence reveal the actions, inventions, and convictions of people who came before us. The coffee we drink today carries genetic traces of the first beans harvested and consumed, even though we are not exactly sure when or where that happened. Coffee was among the first commodities produced not simply for household consumption, but for exchange. How did this happen? As we explore the early history of coffee, we begin to see that the historical spread of coffee is intimately linked with the development of the global markets and international relationships that we know as the modern world system. The patterns of trade, interchange of ideas, and human migrations (forced and voluntary) that began to emerge over 500 years ago laid the foundation for the evolving interconnections, tensions, and contradictions of today's world. Not only was coffee part of this process; in many cases, desires to expand and control coffee production and trade were primary motivations.

## Early Uses and Records of Coffee

Coffee's early history is shrouded in uncertainties. Most likely, coffee originated somewhere in or near present-day Ethiopia, where undomesticated coffee varieties still grow wild. It spread, or was carried, across the narrow Red Sea to

Yemen. The first people to use coffee may have been the ancestors of the militaristic Oromo people, who lived on the southern borders of Abyssinia (today's Ethiopia) (Pritchard 1855). According to early European travelers, the Oromo ground the coffee cherry and bean together with animal fat to create long-lasting, calorically dense food balls.

Coffee drinking was introduced to the Islamic world in Yemen during the fifteenth century, most likely by a member of a Sufi order (Hattox 1985). Sufis quickly adopted coffee because it helped them stay alert during their nighttime devotions. From Yemen, coffee spread throughout the Middle East. By the end of the sixteenth century, coffee had become part of life in the Islamic world, and had been introduced to early European travelers (Jamieson 2001; Tuchscherer 2003).

### Early Struggles to Monopolize Production and Trade

Until the end of the fifteenth century, Europeans depended on long, overland routes to bring spices and valued goods from Asia. The desires of European upper classes to find a quicker, cheaper route set the stage for the evolution of new trade networks. As we know well, Spain financed Columbus's 1492 voyage in hopes of finding a shorter way to India, instead discovering a "New World" of unimagined peoples, goods, and gold. The honor of finding a sea route to India and the Far East's precious spices, tea, and sugar fell to Vasco da Gama, who found his way around Cape Horn in 1498.

Europeans were not alone in seeking to extend their influence, power, and access to valuable products. In the Middle East, Ottoman Turks expanded their empire from the fifteenth through the seventeenth centuries. They conquered Yemen in 1536, and gained control of the coffee grown in mountain villages. In 1537, the expansionist Oromo people of North Africa invaded Ethiopia and, possibly energized by coffee food balls, fought to increase their land and influence. Ethiopian coffee producers, who had dominated coffee production up to that point, could not meet traders' demands in the midst of war. As Ethiopia's coffee production fell, Ottoman Turks in Yemen took over as the world's coffee suppliers. The Yemeni city of Mocha emerged as the predominant port of the Middle East as it sold coffee to increasingly interested Muslim and Christian societies. Coffee was traded over land by camel routes throughout the Ottoman Empire. Thus coffee became a profitable commodity in the Middle East before Holland and Britain became major seafaring powers (Clarence-Smith and Topik 2003). The Ottoman Turks tried to protect their monopolistic power over the coffee trade by prohibiting the export of living plants and fertile seeds. Maintaining a monopoly nonetheless proved impossible.

### Pilgrims and Colonial Powers Spread Coffee in Asia and Africa

Tradition holds that Baba Budan, a Muslim pilgrim visiting Yemen, managed to evade the Ottoman's export ban on fertile coffee seeds by taping several to his stomach and carrying them back home to India. Sometime between 1600 and 1695, depending on the source, Baba Budan planted the seeds successfully in the mountains of Mysora in southern India. From there, Muslim pilgrims probably carried coffee to the East Indies. In 1616, a Dutch adventurer smuggled a coffee plant from the port of Aden to Amsterdam, where it was cultivated in a greenhouse (Pendergrast 1999). The Dutch transplanted seedlings grown in Amsterdam to Ceylon (Sri Lanka) in 1658, and by the end of the seventeenth century, they had planted coffee successfully on Java (Topik 2003). The first plantings on Java failed due to earthquakes and flooding, and new plants were brought from Malabar, India. Thereafter coffee became Java's main export crop, and "java" became inextricably linked to the drink. The Dutch became early leaders in coffee propagation by establishing colonial plantations throughout their Asian colonies. The early history of coffee's spread thus involved thievery, skullduggery, and ambitions for profit by appropriating the plant from its origins.

Between the seventeenth and nineteenth centuries, European governments turned to colonies in Africa to provide coffee for growing consumer demand. The French planted coffee in Côte d'Ivoire, creating large plantations dependent on slave labor. The Germans spread coffee to Cameroon, while the Belgians found spots suitable for coffee in the Congo. The Portuguese established plantations in Angola and Timor, and Italians encouraged coffee production in Eritrea. Britons expanded coffee planting in Kenya, Uganda, and Rhodesia (Zimbabwe), where they prevented native inhabitants from producing coffee to ensure that British settlers would dominate coffee production. In Tanganyika (Tanzania), local peoples had developed successful smallholder coffee production using native varieties before Britons and Germans extended their colonial reach into the region. Colonial administrations chose to protect the indigenous smallholder system rather than risk its disruption by allowing European settlers to take over coffee production (Curtis 2003; Clarence-Smith and Topik 2003). Similarly, producers in Ethiopia's remote highlands continued to grow coffee by traditional means in small plantations. The French East India Company brought coffee to the island of Réunion (formerly the Isle of Bourbon) off the coast of Madagascar in 1715 (Ukers 1935). The island had wild coffee plants, but their quality was considered inferior to the imported plants of Mocha origin. The company governed the island until 1758; it granted land concessions specifically for coffee production and required that each concessionaire plant at least ten trees for each worker. The system depended heavily on slave labor (G. Campbell 2003). In much of eastern and southern Africa, colonial governments chose to support large plantations and used force to obtain labor.

For the rest of Africa's coffee-growing areas, with some exceptions, colonial governments allowed Africans to produce coffee independently because smallholder production presented clear advantages. Households with diversified crop systems had greater resilience to survive market fluctuations, and smallholders using intensive methods usually produced higher-quality coffee than large plantations dependent on coerced labor (Curtis 2003). Colonial policies to support smallholder production or coerce labor for coffee plantations created patterns of labor relations and land tenure that underlie the current social tensions and experiences of inequality in present-day Africa. In a similar time frame, the introduction of coffee and sugar into the Caribbean involved international conspiracies and competition to expand coffee production.

## Coffee Comes to the Americas

While coffee spread in Southeast Asia and Africa, Europe's expansionist governments and ambitious individuals looked to the New World to further expand coffee production. Curiously, Louis XIV of France did not take much interest in coffee (unlike his descendants). Captain Gabriel de Clieu, an officer in the French Navy, decided to introduce coffee to the French West Indies without official approval. He smuggled a coffee plant from Paris to his post in Martinique about 1722 (Jamieson 2001). His part in spreading coffee is better known than most, because he left letters documenting his efforts. The popular version of his exploits holds that he was aided in obtaining coffee seedlings by a French noblewoman. That detail does not appear in de Clieu's writings, but he did note that he had assistance in France, and that it took great effort to keep one plant alive during the Atlantic crossing. A jealous passenger, sometimes identified as a Dutch spy, tried to steal the plant, and managed to tear off a branch. During the voyage, the ship survived a heavy storm, then encountered an extended calm that nearly exhausted the water. The passengers had to survive on severely limited water rations, and de Clieu nurtured the plant for a month with a portion of his ration. Upon arriving in Martinique, de Clieu placed the surviving seedling in fertile soil and posted a guard (Weinberg and Bealer 2002, citing Année Littéraire 1774 vol. VI). This single coffee plant has been said to be the ancestor of most of the coffee plants grown in the Caribbean and Central America (Ukers 1935). That claim overlooks that coffee had already been planted on the island of Hispaniola in 1715, and the Dutch had apparently introduced coffee to Surinam in 1718. Portuguese entrepreneurs smuggled coffee to Brazil in 1727, while Britons planted coffee in Jamaica and Montserrat around 1728 (Jamieson 2001). Caribbean planters soon began to compete with coffee producers from the East Indies. Coffee was not introduced to Mexico and Central America until the nineteenth century, but it became a profitable crop soon after plantations were established (Williams 1994).

The myth endures of a single ancestral line of coffee propagation, but as coffee spread globally, people chose seeds for specific qualities and suitability to local climates. New varieties emerged through natural mutations and human selection. By the 1800s, coffee plantations around the world encompassed numerous varieties that differed from ancestral coffee plants (Topik 2003).

## Colonialism, Slavery, and Forced Labor

The expansion of Europe's colonial powers, especially Britain, France, and Holland, is inseparable from the growth of coffee production in tropical nations around the world. Coffee went hand in hand with colonialism, and its production required inexpensive manual labor. In the East Indies, the Dutch required coffee production of its subjects and forced local leaders into contracts to supply coffee at a set price (Fernando 2003). The French and British, who established extensive plantations in the West Indies, resorted to slaves brought from Africa who labored in coffee and sugarcane plantations in unimaginably inhumane conditions.

Wherever early colonial coffee production depended on large plantations, the owners relied on slavery or forced labor. Large plantations needed many laborers at low cost, and owners resorted to legal and extralegal means to obtain cheap labor. A class of elite coffee growers emerged in conjunction with large plantations and colonial administrations, and often became a powerful interest group that shaped regional policies and social relationships among different economic classes and ethnic groups. By contrast, where small producers grew most of the coffee, they exercised some autonomy. For example, peasant producers in Sumatra were freer from Dutch demands and made their own choices; they responded eagerly to British and American offers of cash for coffee (Fernando 2003). Unfortunately, smallholder producers generally had little access to political arenas, while coffee buyers, traders, entrepreneurs, and colonial authorities often had greater possibilities of influencing policies in their own favor.

The expansion of coffee in the 1600s occurred as the Dutch and British competed to dominate coffee and tea trade through their respective East India companies. They fought three wars related to their trade rivalry between 1652 and 1674. Dutch leadership waned after 1700. In 1784, the Dutch lost their fourth war with Britain, and were unable to recuperate. The British East India

Company became the world's foremost trading power of the era. Britons took Ceylon from the Dutch in 1796, and established large plantations operated by British owners and officials, who depended on coerced labor from southern India. Although the laborers ostensibly received payment, British landlords deducted wages for transportation, lodging, and food. Rather than leaving for home with earnings, laborers became indebted and served essentially as slaves (Kurian 2003).

## The Modern World System Emerges

Political intrigues and conflicts over the control of coffee production and trade contributed to the development of the global economic system that continues to evolve today (De Vries and van der Woude 1997). Most of the major coffee-consuming nations lie north of the Tropic of Cancer, while coffee-producing regions lie in the band around the equator between the Tropic of Cancer and the Tropic of Capricorn. This north–south division aligns roughly with the distinction between the world's most advantaged and least advantaged economies, which trace to the historical division between the imperial nations and the colonized regions.

Western thinking predicted that economic development would reach all nations and eventually increase general welfare to create a more equitable world. By the twentieth century, however, the differences between the wealthier and more impoverished parts of the world appeared to be increasing. Economists Raúl Prebisch and Hans Singer came separately to the observation that persistent economic inequities traced to structural discrepancies in trade; they sought economic remedies to restructure global trade to reduce inequities and alleviate poverty (Toye and Toye 2003). Andre Gunder Frank (1966) and Celso Furtado (1976) examined Latin America's economic struggles and saw the inequities as entrenched processes of "underdevelopment" that resisted transformation. Their ideas became the foundation for dependency theory and its kin, world systems theory. Both approaches agreed that the development of global trade had fostered an inequitable economic system.

According to world systems theory, core or "center" areas, at first Britain, France, and Holland, had strong, centralized governments and benefited the most from trade relationships. They came to dominate the global economy between the sixteenth and nineteenth centuries by managing the acquisition and transportation of valuable raw goods, and processing them into refined or manufactured products. The regions of the economic "periphery" were compelled to provide raw materials at low prices to the core regions. The semi-periphery included regions endeavoring to increase their presence in trade between core and periphery areas, but did not rival the economic power of the core. Some parts of the world, known as external areas, initially maintained relative isolation from the emerging economic system (Wallerstein 1980). World systems theorists, including Immanuel Wallerstein and Peter Worsley, recognized that as the economic system evolved new core areas emerged, and external areas become integrated into global economic relationships. Wallerstein's world systems theory saw the global economic system as an integrating whole, but Worsley argued that the emergence of global economic relationships did not create an integrated system. Rather, the evolution of international trade created three "worlds"—first, second, and third worlds—whose diverse cultures, internal conditions, and external linkages shaped their options (Worsley 1990). Dependency theorists argued that these inequities produced and propagated paternalistic relationships, in which less-developed countries came to depend on dominant countries for trade and political patronage. This dependency, maintained and reinforced by the core countries' political and economic arrangements, made it very difficult for "third world" countries to form effective democratic governments, overcome social problems, or build strong economies.

The emergence of global economic inequities through the evolution of trading patterns has been well supported by examining the history of trade, colonization, and economic processes (Pomeranz and Topik 2006). Yet dependency and world systems theories share a common flaw of failing to acknowledge the variability in local and regional experiences. As even this brief recounting of coffee's spread indicates, individual actions and choices reflect not only global incentives for coffee expansion, but also local conditions. In some places—Jamaica, Martinique, Ceylon, among others—colonial policies granted large landholdings to European settlers, who depended on slaves and coerced labor. In other locations, such as the Dutch East Indies, people were compelled to produce coffee as tribute or to pay taxes. People forced to labor against their will tend to resist and perform as little work as possible, which helps explain the inefficiency and low productivity associated with early coffee production (Topik 2003). Moreover, dependency theories presented European societies and their people as progressive and assertive (as well as exploitative) actors, while presenting other societies as passive, static, or unable to change.

Eric Wolf (1982), a noted anthropologist, pointed out that these theories overlooked or underestimated the efforts of ordinary people in the "periphery" to shape their own lives and assert their interests. He used historical accounts to show that people around the world often participated willingly in new opportunities created by trade, and at the same time attempted to resist domination. The example of Sumatran smallholder coffee producers provides a case in point; they engaged freely in coffee production and trade to gain income. Similar to other smallholder producers who adopted coffee voluntarily, they developed agroforestry systems that combined coffee with other useful crops. The diversity of crops provided a hedge against coffee price volatility and helped protect the coffee from pests and diseases that attack monocrop plantations.

### Early Connections in an Emerging Global System

Coffee was a locus of early trade relations and colonial expansion. The rapid spread of coffee at the hands of colonial governments and entrepreneurs in Asia, Africa, and Latin America often disrupted traditional cultures and lifeways, and dislocated large numbers of people from their homes. Europe's desire for coffee and other tropical goods transformed the lives of the people under colonial rule, but at the same time, exposure to non-European cultures, peoples, and goods changed European societies (Crosby 2003). The unequal relationships within and between peoples that were forged in the early days of European exploration and colonization formed relationships that characterize the modern world system, in which political, economic, and trade arrangements systematically favor manufacturing nations and disadvantage nations that produce raw materials, including coffee. A helpful concept is that of path dependence. It recognizes that patterns in sociopolitical relationships tend to be reinforced and renewed through time (North 1990). Power may shift among different interest groups, but the institutions and governance arrangements that undermine or uphold social justice, human rights, and access to resources resist change. Despite the patterns of inequitable relationships that formed between Europe (and later North America) and its colonies, the examination of specific histories shows that local and regional circumstances led to variations in the general pattern (Fridell 2007). The relationships of trade and colonization have powerful influences but are played out in diverse ways on the ground. The growth of dependency was multifaceted, and inequity occurred in European societies as well. Moreover, the societies of Europe and North America became dependent in another way: they became dependent on coffee.

### Questions for Reading, Reflection, and Debate

1. If you drink coffee, do you know where it comes from? Or the kinds of labor used to produce it? Does it make a difference in your decision about whether or not to purchase a particular brand of coffee?
2. Besides coffee, what other foods or goods are usually produced by tropical nations for consumption by northern nations? Besides climate, what other factors influence this pattern?

3. Compare large and small coffee plantation systems. What are the advantages and disadvantages of each? How might higher-level governance influence the prevalence and success of large plantations? Small plantations?
4. Examine readings by Worsley, Wallerstein, and Wolf: What parts of their writings seem to be best supported by the evidence they present? Which aspects seem unconvincing or weak?

## 6

# COFFEE, THE INDUSTRIAL REVOLUTION, AND BODY DISCIPLINE

> To drink a beverage is to carry out a small ritual, an act that momentarily constructs a slightly more bearable, intelligible world from the chaos that threatens at all times.
>
> Jamieson 2001:279–280

Coffee was known as a beverage or a valuable crop throughout much of the world by the eighteenth century, as trade and exchange linked coffee-producing colonies in the tropics to consumers in Europe. Initially, the upper classes consumed most of Europe's coffee, as well as tea, cocoa, sugar, and rare spices. The ability to consume these exotic imports symbolized not only wealth and the height of fashion, but privileged access to all things foreign (Jamieson 2001). Over the next century, coffee transformed from an elite treat to a beverage for all. How did this transformation occur?

The roots of the transformation trace to several processes, which encompassed growing interest in coffee as a symbol of exotic places, but more importantly to transitions occurring in social and political thought, and technology, which had begun with the Renaissance. Social relationships were also experiencing change with the expansion of merchant wealth, colonial endeavors, and encounters with different cultures and peoples around the world. Moreover, the mercantilist system, through which early traders had controlled trade with monopolistic arrangements, disintegrated as monopolies were broken. Competition among traders brought prices down for coffee and many other goods.

Together these processes set the stage for the Industrial Revolution. As it spread, all of Europe and North America increased their coffee consumption dramatically. The correlation between increasing coffee consumption and industrialization is so strong as to have led some scholars to assert that coffee made the leap from wealthy parlors and coffeehouses to a beverage for the general population because of industrial expansion (Weinberg and Bealer 2002).

Others have gone further to suggest that caffeine is necessary to demands of modern capitalism (Wild 2004).

### Industrial Production and the Expansion in Coffee Consumption

The Industrial Revolution took off between the end of the 1700s and the mid-nineteenth century. Starting in northern England and Scotland, then spreading to parts of Europe and North America, urban areas transitioned to factory production. Factory work demanded alert minds and nimble hands to operate machinery, and the traditional beverages of choice throughout Europe—beer and wine—did not fit these new contexts well. Previously, beer and wine had been safer to drink than most water. Outside of medicinal tonics, hot drinks were basically unknown. The average adult in England consumed weak beer throughout the day, starting with beer soup (prepared with eggs and poured over bread) for breakfast. Beer provided an important source of nutrition (carbohydrates and B vitamins), and most households produced their own beer to meet family needs. A typical English family consumed about three liters of beer per day per person, including children (Schivelbusch 1992). Depending on the strength of the home brew, an average person might pass the day in a semi-stupefied state. Coffee provided a novel alternative, instead of subduing the mind and slowing the body, it enlivened them (Wild 2004).

Important technological innovations facilitated the growth of industry, especially the steam engine, the cotton gin, machinery for spinning and weaving cloth, and advances in steel-making techniques. The steam engine, which was adapted to sailing vessels around 1840, proved revolutionary for sea as well as land transportation. Sailing ships had been unable to trade easily with Central America because prevailing winds could keep the ships trapped in harbors for months. By contrast, the outer Caribbean islands benefited from favorable winds and could be visited year round. Coffee became a profitable export for Central America and southern Mexico when steam-driven ships appeared, because they could enter and leave ports regardless of wind direction (Williams 1994). Central American coffee production soared in tandem with industrial expansion in Europe. Prices for coffee, tea, and sugar declined as monopolies ended, and supplies expanded along with increasing demand. Coffee and tea drunk with sugar became a part of daily diets across Europe's social classes. The sweet drinks offered minimal nutrition but provided calories and an energy boost (G. Clark *et al.* 1995). In France, coffee consumption climbed from 50 million pounds in 1853 to 250 million pounds by 1900, a fivefold increase. In Germany, the 100 million pounds consumed in 1853 increased to 400 million pounds by 1900. Consumption also exploded among the Dutch, Italians, and Scandinavians (Williams 1994).

### Emergence of the Urban Working Class

Before the Industrial Revolution, the population of Europe was mainly rural and most people worked outdoors. Although peasants lived in material poverty, they usually had enough calories to meet their energy needs (G. Clark *et al.* 1995). They obtained food through agriculture, hunting, gathering, and animal husbandry. They grew flax for linen and raised sheep for wool on common grazing lands; communal forests provided wood for fuel, construction, and simple furniture. That way of life began to change with the Enclosure Acts of the eighteenth century, which privatized traditional common lands and transferred them to the landed and noble classes. The process displaced the rural poor by denying them access to the natural resources upon which they depended. Reduced access to resources and the possibility of employment in urban areas combined to push some people and pull others into towns and cities where factory owners needed their labor, particularly in northern England and Scotland where factory production first took hold. Between 1801 and 1850, the proportion of Britons in cities of more than 50,000 people increased from 15 percent to 29 percent (G. Clark *et al.* 1995).

The Industrial Revolution changed the relationship between laborers and the products of their labor, at least in factory work. The transition to cotton cloth from wool and linen replaced the clothing production previously carried out at the household and village levels. People produced part of the final product rather than producing something from start to finish, and were paid for performing certain tasks within specific time frames. The factory products were sold regionally, nationally, and internationally; goods became commodities sold without reference to the context of production or circumstances of the laborers (Wolf 1982). Thus, the Industrial Revolution facilitated the fetishism of the commodities for goods that households had once produced for their own use or local exchange. Coffee was already a commodity; it had long been carried to consumers far from its points of origin.

With few other employment options than factory work, displaced farmers and the rural poor became the urban working class. They typically worked in dark, poorly ventilated rooms designed for machines, not for human health or safety. Factory workers had to perform the same task hour after hour, 12 or more hours per day, 6 or 7 days per week (Hopley 2006). People's daily and annual schedules no longer related to a round of activities linked to sunlight and darkness, or to the seasonal cycles of raising crops and domestic animals.

Their schedules became fixed by the clock and the demands of industrial efficiency. Industrial production thus transformed the laborer's relationship with the passage of time; it also transformed human relationships with tools and forged new relationships with machinery. Factory jobs required people to meet the needs of machines that produced impersonal goods, rather than utilizing tools to create personal goods.

Successful laborers had to perform repetitive machinelike motions, maintain their concentration or risk injury, and ignore the physical aches and stresses that resulted. Overseers and managers similarly had to work within specific time frames and meet deadlines imposed by contracts. Although their jobs were less physically demanding than manual labor, individuals in supervisory or other "white-collar" jobs had to sit or stand for long hours with limited movement. Such large segments of the population had never before been required to keep such rigid, physically constraining schedules. Coffee (and tea in Britain) provided caffeine for workers to stay alert.

The correlation between the growth of industrial labor and caffeine consumption appears to have developed synergistically. Drinking coffee or tea, with its dose of caffeine, helped workers adapt their bodies and minds to a way of living that humanity had not encountered previously. At the same time, coffee helped factory managers and owners to meet their goals of higher productivity and profits.

## Factory Jobs and Body Discipline

Factory laborers were (and are) subjected to what French philosopher Michel Foucault (1995) called "body discipline." Through their subjection to supervision and the need to function in mechanistic, controlled motions under severe constraints, factory laborers became "docile bodies" to be manipulated by the needs and demands of a hierarchical, industrial society. Body discipline imposes a set of expectations that individuals must accept and meet dutifully to obtain or maintain a certain social position. The compensation for factory laborers came in the form of wages and acceptance within their social milieu, but factory labor carried a cost. Individual freedom of movement and expression became limited by the demands of the job. Workers were subjected to surveillance and threat of punishment (loss of employment or wage curtailment) if they failed to perform at expected levels of productivity or obedience. Coffee and tea can be seen as aids to body discipline. They also provided a convenient medium for the ingestion of sugar. In Britain, the consumption of sugar (including molasses and syrup) increased from four pounds per person per year in 1700 to 18 pounds in 1800 (Mintz 1986). It continued to climb thereafter. Sugar and caffeine became substitutes for whole foods with high nutritional content, and reduced the time needed to prepare meals among adults who worked long factory shifts. With falling prices for sugar and coffee, the proportion of income that poor households required to meet caloric needs also may have fallen, although nutritional needs may not have been met.

The interesting question is what would have happened if there had been no coffee or tea at the time of the Industrial Revolution? From that time forward, coffee became increasingly part of people's lives, and many people use coffee (or tea) as a way to deal with lifestyles that require long hours of concentrated mental effort.

### Questions for Reading, Reflection, and Debate

1. What does *body discipline* mean? Where is it found? Have you ever experienced it?
2. What were the reasons for increased consumption of coffee, tea, and sugar during the Industrial Revolution?
3. How do recent changes in food habits relate to the global system of trade?
4. Why has it been said that caffeine is necessary for the functioning of the modern world system? What do you think?

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# Part II

# ACCOLADES AND ANTIPATHIES

## Coffee Controversies through Time

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## 7

# COFFEE CONTROVERSIES AND THREATS TO SOCIAL ORDER

As coffee spread, controversy erupted. More than any other beverage in history, coffee seems to have excited concern, resistance, and even overt opposition as it gained popularity. Coffee historians observe that coffeehouses have been hotbeds of social change in the Middle East, Europe, and the Americas. Why has coffee been such a controversial beverage? Is there a genuine relationship between coffee, coffeehouses, and social transformations?

To explore these questions, the following discussion focuses on the Middle East in the sixteenth and seventeenth centuries, and briefly considers the Revolutionary War of the USA and the French Revolution. The discussion concludes with an effort to answer the questions posed above.

### Coffee and Social Critique in the Middle East

Although coffee's introduction in the Middle East occurred in association with religious rituals and medical applications, it was adopted promptly as a social beverage by the general populace. By the sixteenth century, entrepreneurs were selling it in the streets and establishing coffeehouses, which became public gathering places where people of different backgrounds and classes could mix and converse. Middle Eastern society at the time did not offer nonreligious gathering places; taverns did not exist because Islam prohibited the consumption of alcoholic beverages, and eating at restaurants was not customary. Therefore, coffeehouses drew people easily, and facilitated a lively social atmosphere that attracted the suspicions of pious leaders and officials. Religious leaders and sects differed on how they interpreted coffee's legitimacy and legality under Islamic law. Its proponents, including members of the Sufi order, emphasized its beneficial attributes of maintaining alertness for long rituals. Detractors pointed out that the Qur'an prohibits the consumption of charred food, and coffee beans are charred by roasting. Other pious Muslims felt that anything new merited prohibition, because the Qur'an did not discuss it. Meanwhile, religious-political leaders became uneasy as coffeehouses became places for social revelry and activities deemed immoral by Islam, including unorthodox sexual behaviors.

Crowds in coffeehouses talked freely about social problems and dared to venture political opinions; for many leaders, this was unacceptable.

One of coffee's early opponents was Kha'ir Beg, an official charged with keeping public order in Mecca. In 1511, he discovered a group of people drinking coffee outside a mosque, and to his eyes, their gathering looked suspicious. He moved to prohibit coffee and coffeehouses by presenting evidence before the *ulema* (expert jurists in Islamic law). He argued, with support from witnesses and physicians, that coffee involved problematic public gatherings and caused mental and physical perturbations. Historical accounts differ on whether he was acting alone or under pressure from several other anti-coffee fanatics (Hattox 1985). The *mufti* (a religious legal authority) of Aden argued forcefully in favor of coffee, but jurists decided to prohibit it, perhaps out of fear of Kha'ir Beg. One historical chronicler asserted that many of the jurists drank coffee, but were unwilling to risk Beg's wrath. Beg appears in the records as a rigid and intolerant individual, "someone who was not only too uptight to have fun but was alarmed by evidence that other people were doing so" (Weinberg and Bealer 2002:12). Beg and his deputies proceeded to close down coffeehouses and burn all the coffee they found. His campaign proved short. When the sultan in Cairo, a known coffee drinker and Beg's superior, received a copy of the ordinance, he softened it considerably. Coffeehouses reopened, with the expectation that clients would behave decorously (Robinson 1972).

The sultan's edict failed to settle anything, not even in Cairo. In 1521 and 1532, Cairo suffered riots over coffeehouses. Opponents included people opposed to coffee on religious principles, as well as neighbors who were tired of coffeehouses' raucous noise late at night. In Constantinople, the first coffeehouse opened around 1554, and rapidly attracted a large public that sipped coffee while engaging in a range of social activities—animated conversation, political debate, playing games (such as chess and backgammon), listening to storytellers, and perhaps conducting certain prohibited activities. European visitors suspected that young boys working as attendants also served as prostitutes; however, these travelers may have been predisposed to suspect such behaviors in cultures they found strange (Ellis 2004). By 1570, 600 coffeehouses were reportedly operating in Constantinople (Weinberg and Bealer 2002). Around 1580, the sultan became concerned over coffeehouse goers' making seditious statements, perhaps inspired by his acts of fratricide (he murdered five brothers to consolidate his power). Eager to quiet his critics, the sultan closed coffeehouses on the grounds that coffee beans were charred, and therefore prohibited by the Qur'an.

His successor reopened coffeehouses, in part to regain tax income. The following sultan, Murat IV, became known for his violent and merciless temperament. To impede opposition to an unpopular war, he closed coffeehouses, and ordered that the proprietors and customers be tied into bags and thrown into the Bosporus. Over and over again, as coffee and coffeehouses spread across the Arab-Islamic world, the conjunction of religious, moral, and political challenges posed by coffee consumption led to efforts to prohibit its use, close coffeehouses, and punish its proponents. In all instances, bans proved ineffective or short-lived. Prohibitions might have driven coffee drinking into secrecy but did not stop it. Indeed, coffee became so integral to daily life that women, who could not enter coffeehouses, could claim lack of coffee in the home as a contributing justification for divorce. Coffee remained a topic for religious debate, dissertations, essays, and poems for decades across the Islamic world, but coffee consumption was rarely affected (Ellis 2004).

### The Patriotic Drink: Revolution in the USA (1775–1783)

The history of the Revolutionary War ties to the early consumption of coffee in the Americas. The Boston Tea Party occurred during rising resistance to British taxation. The British government had attempted to impose a series of taxes and constraints through the Sugar Act, Stamp Act, Townshend Acts, and Coercive Acts, all of which met with resistance. As every student of US history recalls, many citizens in America's British colonies found it unjust to pay taxes to a government in which they had no representation. Their frustrations culminated in the Revolutionary War and food riots over unjust increases in prices during the period leading up to independence (B. Smith 1994). Until that time, the colonists had been fond consumers of tea, as well as coffee and cocoa. To avoid paying duties on tea, which had long been in place, colonists had increasingly bought tea imported illegally by smugglers. The illegal trade lowered the sales of the East India Company, and tea accumulated in its warehouses (Thomas 1985).

The British Parliament, acting to advance interests shared with the East India Company, authorized steeply discounted, but additionally taxed, tea prices for the colonies (Thomas 1985). Parliament expected that colonists would willingly buy the much cheaper tea, and thus put smugglers out of business, increase income for the East India Company, and reduce accumulated stores of tea. More important, if colonists bought the inexpensive tea, they would be paying the tax and capitulating to the government. Patriots saw through this ploy; Parliament's move turned patriots against tea entirely. John Warren and Paul Revere published a resolution that vowed to oppose tea sales by the East India Company, and the Continental Congress concurred. John Adams, who was to become the second president of the USA, evidently preferred tea to coffee; he declared that the sooner he could break himself of the tea-drinking habit, the better (Wild 2004). Interestingly, the colonists paid import duties on coffee. It was not merely the tax on tea that spurred supporters of independence to drink coffee. Tea represented part of British culture, and thanks to the Parliament, it became a symbol of British oppression.

American coffeehouses offered opportunities for patriots to gather surreptitiously. At that time, taverns served as centers for business activities as well as for social gatherings. In Boston, the Green Dragon Tavern became known as the "Headquarters of the American Revolution." Secret societies including the Sons of Liberty, who evidently instigated the Boston Tea Party, met regularly in meeting rooms at the Green Dragon. Similar to other taverns in the colonies, it served coffee, tea, ale, and cocoa. The instigators of the revolution most likely drank coffee to maintain their focus. It is improbable that they would have chosen tea, which they vehemently opposed. When Paul Revere and William Dawes launched their famous rides to warn that British troops were moving to arrest patriots, they met with co-conspirators at the Green Dragon to discuss their plans (Morais 1942). Britons did not attempt to close coffeehouses or prohibit coffee drinking; in fact, loyalists frequented coffeehouses sympathetic to the Crown. After the revolution, these coffeehouses embraced independence, sometimes changing their names to reflect newly found patriotic zeal (Wild 2004). The preference for coffee drinking established during the revolution set the stage for the USA to become one of the world's foremost coffee consumers.

### Caffeine and the French Revolution (1789–1799)

Less than 5 years after the American Revolution ended with Britons acknowledging their former colonies' independence, French patriots launched the French Revolution. The French cry of "Liberty, Equality, Fraternity" echoed and was to some degree inspired by the American Revolution's "Give me liberty or give me death." Both revolutions arose out of grievances over the political status quo, and involved mobilization primarily among the middle classes and intellectuals who disagreed with inequities propagated by the existing governments. Coffeehouses provided an ambience favorable for learned discussions, impassioned discourses, and political discussions. The Café Procope, among the first coffeehouses in Paris, attracted literary luminaries, including Voltaire, Rousseau, Diderot, and Victor Hugo, and was visited by the young Napoleon Bonaparte. Paris offered a dynamic coffeehouse culture; somewhere between 320 and 600 existed on the eve of the French Revolution (Weinberg and Bealer 2002). At the time, Parisian coffeehouses provided the city's sole social context in which different socioeconomic classes, and both men and women, interacted on an equal basis. Despite watchful eyes of government spies, coffeehouses became sites for nurturing ideas of revolution as members of the upper class, including leading French thinkers, interacted with the working class (Haine 1996). The arcades of Palais Royale, site of Café Foy, became a gathering place for the general public and revolutionary leaders, who laid plans to overthrow the government with coffee close at hand (Pilcher 2006). On July 12, 1789, Camille Desmoulins climbed onto a table in Café Foy and delivered a fearless speech calling citizens to arms, inspiring the crowd to open rebellion. Two days later, a furious mob stormed the Bastille (Standage 2005:170).

## Is Coffee a Threat to Social Order?

Why has coffee been such a controversial beverage? This question has yet to be answered definitively. It has been argued that coffee played its unique role because it was new and introduced relatively recently in human history. Although some segments of human societies tend to welcome the new, other segments tend to regard the unknown with caution or fear. Yet, tea and chocolate were introduced to Europe and the Middle East in approximately the same period and did not excite the resistance that coffee experienced. Middle Eastern and European societies did not attempt to prohibit either tea or chocolate. Thus coffee's "newness" may have been a factor, but does not suffice to explain the reactions it inspired. Another possibility may lie in coffee's stimulating effects, but other caffeinated beverages were already available in most places at the time of coffee's introduction. Thus it did not become controversial solely for its novelty or its stimulating effects.

A key factor appears to be coffee's association with a unique context for social interaction, the coffeehouse. For Middle Eastern society, the coffeehouse represented an innovation because it was not explicitly forbidden by Islam as were wine and taverns. With coffee, people could meet and drink together without becoming sleepy or drunk. But why did coffee lead to gathering places dedicated to its sale? This question remains a mystery. Caffeinated drinks other than coffee have not been consistently associated with locations featuring their sale. Tea houses and "tea gardens" have arisen at certain points in history, but they have not had the widespread and enduring appeal enjoyed by coffeehouses. Certain societies nevertheless developed strong preferences for tea, reflecting specific historic and social experiences. Therefore it is not clear that coffee enjoyed any great advantage over other stimulating drinks. By most accounts, it is more difficult to prepare good coffee than tea or cocoa, because the grounds must be separated or "tolerated" with the drink. It is possible that by the circumstances and timing of their introduction, coffee and coffeehouses came to have meanings and associations that distinguished them from potential competitors. The constant factor appears to be an association between coffeehouses and opportunities for social interaction that were not otherwise available.

Is there a genuine relationship between coffee, coffeehouses, and social transformations? Historians note that numerous factors contribute to processes of social and political change. The apparent relationships among coffee, social controversy, and revolutions need to be placed within the broad cultural and economic contexts of each time and place. The introduction of coffee drinking, and especially the emergence of coffeehouses, subtly changed the social environment because it entailed a new context for social interactions. Caffeine drinkers tend to become more active and engaged intellectually, in sharp contrast to those who rely on alcoholic beverages for refreshment. The combination of mental alertness and sociality spurred lively conversations, which could turn readily to political debates and social critique. At certain points in history, coffeehouses became places where people had the chance to question authority, challenge preexisting norms and customs, discover new ideas, and foster political action. For people in power at times of social tension, coffee and coffeehouses could threaten the status quo. Struggles over coffee, and social resistance spawned in coffeehouses, recurred through the sixteenth, seventeenth, and eighteenth centuries as entrenched powers and common people experienced economic and political transformations. But it seems unreasonable to suppose that social transformations and revolutions would not have occurred without coffee. Considering the history of resistance, insurrection, and social change, it is clear that people do not need coffeehouses—or caffeine—to oppose injustice, foment revolution, or create new ways of thinking and interacting. In some places, however, coffeehouses appeared at the right time to become incriminated in social tensions and transformations. Thus the apparent association between coffeehouses and countercultural movements may be circumstantial. If so, it was an accident that has repeated itself in many places through time.

## Questions for Reading, Reflection, and Debate

1. What are coffeehouses known for in the present? How are their reputations similar to those found in ancient Egypt, Turkey, France, or Britain? How are they different?
2. In what ways is coffee controversial today? Besides coffee, what other beverages or foods have been controversial?
3. How might social issues and concerns influence controversies over foods? For example, how do current societal concerns over obesity trends influence debates about food choices?

# 8

# NATIONAL IDENTITIES AND CULTURAL RELEVANCE

Hundreds of nations and millions of people produce or consume coffee. But what it means to people varies greatly, and the meanings and values associated with coffee are not clearly related to how much is produced or consumed. In some places, coffee has become so integral to daily life that it has become part of national identity. In other places, coffee has been little more than a habit or necessity of life, and in some places, coffee has been overlooked or rejected. Why do these differences exist? This chapter contrasts two producing countries, Brazil and Colombia, and two consuming countries, Britain and Germany, to illustrate how different historical contexts and processes have led to different degrees of national identification with coffee. All of these countries have some common elements that appear to be conducive for embracing coffee as part of national identity. Brazil and Colombia held the positions of the world's first- and second-largest producers of coffee throughout the twentieth century (Vietnam pushed Colombia to third place at the dawn of the twenty-first century). Colombia's global fame and national identity has been closely tied to its reputation for producing high-quality arabica coffee, which is the more valuable of the two commercially produced species of coffee; the other is robusta. Brazil produces more coffee than any other nation in the world, but its global reputation and national identity ignore coffee. Britain had an early infatuation with coffee, but turned into one of the world's most famous tea-drinking nations. Germany accepted coffee later than its neighbors in Western Europe, but today it is among the world's foremost coffee-importing and -consuming nations. Yet Germans retain greater fame and affection for beer. Scholars looking at these differences have explored cultural, economic, and political factors but generally concur that no single factor determines whether a group or national populace comes to understand coffee as integral to an overarching identity, rather than seeing it as simply a crop or a beverage.

National identity evolves in relationship to nation-building efforts. Creating the perception of shared identity is a critical challenge to facilitate the governance and control of large populations, especially because today's nation-states typically encompass disparate socioeconomic classes, multiple religions, and diverse ethnic groups. National identities serve the purpose of uniting people into a common nationality despite differences and tensions that may divide them (Schultz and Lavenda 2009). It's then easier for them to tolerate societal rules and constraints on behavior, and perceive that the benefits of citizenship outweigh possible costs. The formation of national identity is an ongoing process, which typically entails a variety of components (e.g., meaningful symbols, ideas, values, attributes) that can encompass multiple meanings and interpretations, and nonetheless create a sense of shared experience.

Is it valid to ask why a beverage would be a worthy component in national identity? Yes. Nearly all locales and nations identify themselves with certain foods and drinks that carry strong associations. The following discussion uses the four examples mentioned to explore why coffee has become part of national identity in some places, while in other places with apparently similar experiences, coffee has been excluded or overlooked.

## Brazil's Nonidentification with Coffee

If ever a nation deserved fame for coffee, it would be Brazil. It became the world's largest coffee producer in the nineteenth century, and no country has yet to challenge its preeminence. In the extraordinary year of 1906, Brazil produced 82 percent of the global coffee supply. Until the mid-twentieth century, it produced almost 60 percent of the world's coffee every year (Topik 1999). Today, global production has increased as more countries produce coffee, but Brazil still represents about 30 percent of the annual global coffee production (ICO 2009). During the late nineteenth and early twentieth centuries, coffee exports set off a process of vigorous industrial development and economic diversification in Brazil, particularly in the principal coffee-producing states of Rio de Janeiro and São Paulo. Taxes on exported coffee constituted a major proportion of government income; they supported coffee prices, the development of transportation infrastructure, and immigration of laborers from Europe (Pereira de Melo 2003). Yet few people identify Brazil's vibrant, diverse national culture with coffee. Brazil's great authors, painters, and scholars have overlooked coffee as a topic worthy of examination or artistic expression. The reasons for this mysterious oversight can be traced to a combination of factors, including coffee's relatively late arrival as a plantation crop, cultural perceptions of the rural hinterland, the public impression of elite coffee growers, and the social and environmental devastation that coffee plantations left in their wake.

The colonial period of Brazil did not evolve around coffee production, but around sugar and mining. Sugarcane was the first major plantation crop, and its demand for cheap labor drove Brazil's dependence on slavery. African peoples were brought forcibly to Brazil to work on sugarcane plantations, and became integral to the evolution of the nation's nuanced experiences of race and cultural diversity. When coffee plantations took hold and spread into the interior, they exacerbated the demand for slaves. With its reliance on slaves, Brazil delayed the abolition of slavery until 1888, the last country in the Western Hemisphere to do so. Coffee growers then turned to European immigrants, who often paid off their overseas passage through years of indentured servitude.

Coffee was introduced into southeastern Brazil around 1774, and at first became established on cleared lands previously planted in sugarcane (James 1932). Coffee plantation life in the rural interior was contrasted with the sophistication of urban culture; the interior was seen as uncivilized. Plantation owners typically left overseers in charge of their plantations and maintained primary residences in cities. Owners often invested in factorage houses that transported coffee to port cities and financed plantation operations (Pereira de Melo 2003), and thus multiplied their wealth. The children of coffee producers associated themselves with urban society and professions that belied their ties to coffee. The coffee oligarchy became unpopular for autocratic behavior and its pressures on the government for favors, even though it never exercised as much influence as commonly perceived (Topik 1999).

Coffee plantations exhausted the soil and, after a few decades, had to be abandoned and replaced with new land acquired further into the interior. Thus coffee was a transitory phenomenon in local economies. Moreover, it usually left behind degraded land and impoverished, landless laborers as well as stagnant rural economies (Pereira de Melo 2003). In the popular imagination, Brazilians did not associate coffee with economic development but with disliked coffee barons, the disgrace of slavery, and a backward, devastated interior. It probably did not help that Brazil's coffee developed a reputation for unreliable quality. Well-cared-for Brazilian arabicas competed with the world's top coffees, but many plantations produced low-quality robustas and suffered from the disregard of an exploited labor force. As one scholar of Brazil's national identity stated, "In fact, coffee is treated more as an embarrassment, a stage that had to be endured but needed to be passed through as quickly as possible" (Topik 1999:87). Instead, Brazil's identity emphasizes a common language (Portuguese) distinct from its Spanish-speaking neighbors, its large territory, great cultural diversity (European, African, AmerIndian, Arab, and Japanese), and global presence, in a combination that is uniquely and powerfully Brazilian (Lafer 2000).

## Colombia's National Pride of Coffee

Colombia achieved early renown for the quality of its arabica beans; they became a standard against which other beans were measured. Coffee production spread into Colombia from Venezuela and became an important economic activity by 1870. By 1887, coffee represented 40 percent of the value of Colombia's exports; this percentage climbed through 1943, when it reached 80 percent (Ortiz 1999). Only in the latter half of the twentieth century did coffee's contributions to total export income begin to decline as Colombia diversified into alternative export commodities. In contrast to Brazil, where relatively few people owned coffee plantations, smallholders dominated Colombia's coffee-producing sector through the first 80 years of coffee's development. Elites owned large plantations in certain regions; thus at a national level, coffee growers represented a range of socioeconomic classes.

Smallholdings provided a number of advantages in comparison to largeholdings, which evidently helped their persistence as national laws changed to facilitate the expansion of largeholdings and capitalist agriculture in the last half of the twentieth century. Smallholders generally planted a variety of food crops, trees, and useful plants interspersed with coffee; this diversity gave them greater resilience to withstand price fluctuations in coffee markets (Ortiz 1999; Roseberry 1995). Compared to largeholders, smallholders typically organized labor more effectively and kept costs low with family labor. Through careful management, they also received a greater return on capital investments (Stolke 1995; Taussig 1978). Perhaps more important, coffee came to represent the lives and livelihoods of millions of Colombians, and coffee plantations became an enduring feature of the landscape. Under the protection of shade and careful stewardship of smallholders who often gave trees individual attention, coffee did not exhaust the soils as it did in Brazil. Coffee pickers picked each cherry as it fully ripened, which maximizes quality, flavor, and price. Such intensive labor and supervising is easier on small plantations, especially when pickers have a personal stake in the outcome. By contrast, pickers on Brazil's large plantations typically stripped cherries indiscriminately from the branches, mixing overripe and unripe cherries with mature ones.

Colombian coffee growers have been relatively successful in forming a national-level cooperative to defend their shared interests. Starting with a small group of coffee growers, the National Federation of Coffee Growers of Colombia (FNC) emerged in 1927. It operates programs to support Colombian coffee growers, enforces high standards, aims to protect farmers from price fluctuations, and promotes Colombian coffee. The FNC created the Juan Valdez logo in 1981, the fictional figure of a stalwart Colombian coffee grower in the company of his faithful mule. While the stereotypical Valdez figure hardly represents Colombia's diverse population of growers, it has served as an effective symbol to promote and build upon Colombian coffee's fine reputation. Such a figure would not work for Brazil, which lacks a common set of standards and quality enforcement, and does not have a global reputation for quality. FNC includes approximately 563,000 coffee producers, of whom 300,000 are considered to be smallholders; it also provides programs to support the 4 million Colombians whose livelihoods depend in some way on coffee (FNC 2014).

Coffee became a source of pride for Colombians and an integral part of national identity as its quality and rich flavor gained worldwide recognition. A large number of Colombians considered coffee to be central to their well-being, labored to maintain its high quality, and occasionally collaborated to defend joint interests in political spheres—although they argued over specific policies. Urban populations recognized the economic contributions of coffee, and embraced coffee as a national beverage that represented a special combination of hard work, commitment to quality, and appropriate use of a mountainous environment that is exceptionally suited to coffee production. These factors interact to produce what some believe to be the world's best coffee. In Colombia, coffee has become a symbol of national excellence.

### Britain and the Abandonment of Coffee

Britons developed an early passion for coffee. The spread of coffeehouses between 1650 and 1750 created a context for the mingling of social classes, lively intellectual exchanges, and business transactions. The development of newspaper and insurance companies, such as Lloyd's of London, began in coffeehouses. By 1700, London had around 2,000 coffeehouses, many of which provided space for fledgling businesses that bolstered the economy (Schivelbusch 1992). However, Great Britain turned decisively to tea in the mid-eighteenth century. Scholars have pondered whether the population had a different "taste" or cultural factors that turned them to tea, but no convincing evidence for this can be found. A more compelling perspective arises through examination of the British East India Company's activities, and the structure of British taxes on coffee and tea (S. Smith 1996).

The British East India Company, chartered in 1600, represented British trading interests. Its ships carried British products to sell around the world, imported goods to Britain, and re-exported goods produced in British colonies. In the process it made a good deal of money, shaped the development of the British Empire, influenced legislation, and exercised authority over certain colonies including parts of India. This "state within a state" had a monopoly on British tea trade from China, which was the world's main source of tea. Not until the nineteenth century did other places become commercial sources of tea. By contrast, most coffee shipments were handled by middle-class merchants. In the contest between coffee and tea for Britons' loyalty, the British East India Company had the advantages of political power and wealth.

Britons learned about tea not long after coffeehouses began to spread through southern England. Tea did not become popular, however, until King Charles II married Catherine of Braganza, a Portuguese princess, in 1662. Catherine's dowry included a chest of tea and title to the colony of Bombay, which satisfied a long-standing British goal to build trade with India. Catherine disdained coffee, and became known for elegant tea parties for the aristocracy. The general populace took note, and her example probably enhanced the desirability of tea as an energizing "sobriety drink." Along with coffee and hot chocolate, tea was served in coffeehouses.

The seventeenth century's scanty records suggest that coffee and tea cost about the same, import duties were comparable, and British consumption was similar. Tea cost more per pound, but tea leaves could be used several times. In 1711 and 1724, Parliament raised the import duty on coffee to nearly twice that on tea. At that time, most of the world's coffee still came from Yemen. It wasn't until the 1730s that the French Antilles and Jamaica began to produce significant harvests, soon joined by Java. British coffee consumption maintained similar levels with tea until tensions between Britain and Spain escalated into the War of Jenkins's Ear (1739–1748). War interrupted coffee shipments, and in 1745/1746, the import duty on tea was reduced. As the price of tea declined relative to coffee, Britons drank more tea and cut back on coffee (S. Smith 1996). Nonetheless, the British East India Company accumulated excess supplies of tea. Reductions in tea prices as well as tax breaks continued; apparently related to the company's need to move its backlogged inventory.

The Industrial Revolution spurred tea consumption; served with sugar, it became an inexpensive source of calories for the working class (Mintz 1986). Tea also carried the advantage that it did not need to be ground prior to preparation. By the late eighteenth century, Britain had become a tea-drinking nation, and embraced tea and its rituals as uniquely British. Through the eighteenth and nineteenth centuries, Britain gradually acquired many coffee-producing colonies, eventually controlling Ceylon, Kenya, Uganda, and part of Tanganyika (Clarence-Smith and Topik 2003). Most of Britain's European neighbors consumed little tea, but gladly bought re-exported coffee that came through London from British colonies (Price 1989). It is, of course, too simplistic to credit Britons' fondness of tea solely to its price differential with coffee. Tea gardens spread in the eighteenth century by offering a family atmosphere that contrasted with males-only coffeehouses (Weinberg and Bealer 2002). Tea drinking became associated with gentility, style, domesticity, and civilized manners, unlike coffee's association with intense and sometimes loud debates. Coffee and coffeehouses fell from favor. More broadly, Britain encouraged the populations of its colonies to embrace tea drinking, in concert with the British

East India Company's endeavors to sell more tea as plantations in Ceylon and India began to bolster global supplies. But even today, a number of questions endure as to why and how Britain became the lone tea-drinking bastion in Western Europe (Schivelbusch 1992).

### Germany's Love of Beer and Coffee

Today, Germany is the world's second-largest coffee importer, after the USA, and has one of the highest coffee consumption rates per capita in the world (Coffee Futures 2007; ICO 2009). Germany's love affair with coffee had a difficult and slow start. Coffee came later to Germany than to most of its neighbors—England, France, Belgium, and the Netherlands. Coffee arrived in Germany by way of Holland around 1650, and appeared on apothecary lists as a medicinal substance around 1657. Almost a quarter century passed before the first coffeehouse opened in Hamburg, where it served English sailors and merchants. Germans continued their love affair with beer while the rest of Europe embraced coffee, tea, and sobriety. For the peasantry, beer provided a major source of calories, carbohydrates, vitamins, and minerals for their diet. In contrast to modern industrial brews, traditionally made beer was low in alcohol (Schivelbusch 1992).

Berlin's first coffeehouse opened in 1721 to serve the general public, and thereafter coffeehouses gained popularity rapidly. German doctors found coffee to be a health threat, and declared that it caused sterility, to little avail. Coffee became so popular that King Frederick the Great became concerned that his people were abandoning beer in preference for coffee, which he saw as a poor substitute. In 1777, he issued a proclamation that declared in part, "My people must drink beer. His Majesty was brought up on beer, and so were his ancestors, and his officers" (Ukers 1935:42). Historians suspect that Frederick's primary concern was not his people's welfare, but the expense of importing coffee. Germany was a minor player in the colonial era; it did not have colonies to provide coffee for the country. Therefore Germany had to import coffee at considerable expense from its neighbors. Frederick attempted to end coffee consumption among the general populace, but he supported coffee drinking among the Prussian upper classes. He created a monopoly on coffee, and issued permits to roast coffee solely to members of the upper class. Frederick made a fortune by controlling coffee sales. Common people endeavored to obtain coffee by stealth, but the monarchy enlisted former soldiers as "coffee sniffers" to report and fine anyone caught roasting coffee without a permit. This highly unpopular move compelled commoners to substitute roasted chicory when they couldn't find a way to drink coffee without being caught. The elite openly consumed coffee, which probably increased its demand among the lower classes and its popularity on the black market. By the end of the nineteenth century, the legal constraints on public coffee consumption evaporated (Ukers 1935; Weinberg and Bealer 2002). Today coffee is one of Germany's preferred beverages, and through much of the latter half of the twentieth century, businesses closed for an hour in the afternoon for a coffee break. Germans introduced *Kaffeeklatsches*, coffee cake, and filtered coffee to the world, and yet coffee seems of minor importance to German identity. Beer, however, retains a special place in German hearts and minds.

### What Determines the Integration of Coffee into National Identity?

The examples of these four nations only touch the surface of the great diversity that exists in how national identities have integrated or rejected coffee as a representative characteristic. These examples show that no single factor will predict whether something—even a humble drink—will become part of a nation's identity. It takes multiple, interacting dimensions through time, which may or may not include economic costs and benefits, government policies, social popularity, or power and pressure of the elite. Ultimately, national identities incorporate elements that resonate (or can be made to resonate) with a broad swath of the population, and their economic, social, and political contexts.

### Questions for Reading, Reflection, and Debate

1. What foods or drinks would you consider to be part of the USA's national identity?
2. Is coffee part of your national identity? Is it part of your individual identity? Why or why not?
3. What other countries in the world do you think of as having national identities that include coffee?
4. Juan Valdez is described as a stereotypical figure. What makes Juan Valdez stereotypical, while Colombia's national identification with coffee is not understood as stereotypical?

# 9

# COFFEE WASTE, CONSUMER CHOICES, AND ACTIVISM ON COLLEGE CAMPUSES

*In nature there is no such thing as waste.*
*How you imagine the world determines how you live in it.*

David Suzuki

Waste from coffee consumption represents an important component of landfills in the USA. Restaurants produce more garbage than most other businesses; on average, each location sends 100,000 pounds of waste annually to landfills (Horovitz 2008). With over 10,000 outlets in the USA, Starbucks is the best known of the many coffee shops augmenting national streams of waste with disposable cups, twizzle sticks, cup sleeves, napkins, and food containers. Moreover, only 28 percent of coffee shop customers drink their beverages in the shop, meaning that to-go cups are in high demand (Mintel 2013). Disposable cups add up; Starbucks alone uses approximately 4 billion paper cups globally every year (Starbucks 2011). But that's only part of the story of coffee waste. When John Sylvan invented the K-cup and Keurig single-serve coffee makers in the early 1990s, he unintentionally created a new waste stream composed of discarded K-cups. In 2014, Green Mountain Coffee, the owner of Keurig, sold 8.3 billion K-cups—enough to circle the world 10.5 times (Godoy 2015). K-cup sales surged to 9.8 billion in 2015, but Keurig's plastic capsules and foil covers are not recyclable in most places, nor biodegradable (Gelles 2016; Godoy 2015; Hamblin 2015).

Concern over K-cups places coffee once again in the center of a social debate, which juxtaposes consumer desires for convenience with environmental concerns. The debate over K-cups highlights tensions that can be dizzying for the hearts and minds of environmentally minded but time-constrained, convenience-conscious consumers. The Green Mountain Coffee Company claims that K-cups use less water and energy than other types of coffee makers, further complicating a consumer decision (Oatman 2014). Which choice is best for the environment: to reduce non-recyclable waste, or to conserve water and energy? What about other considerations, such as cost? The quantity of coffee in K-cups sells at an estimated cost of $40 per pound, about three times more than a pound of Starbucks coffee sold in a vacuum pack (Chen 2015). For consumers, making decisions between competing concerns can be frustrating: No matter what we choose, we sacrifice something. K-cups are just one example of this kind of conundrum. In this chapter, we'll wrestle with the challenge of coffee-related waste. We'll consider the implications of our choices and possible paths forward, with special attention to waste-reduction efforts on college campuses.

## The Problem with K-Cups

> *Single-serve coffee is a solution to something that wasn't a problem. A French press, for example, is also single serve, but doesn't generate so much waste.*
>
> Darby Hoover, National Resources Defense Council (Gelles 2016)

K-cups are one form of coffee capsules, also called pods. Coffee capsules entered the market in 1986 when Nespresso coffee began selling its single-serve espresso machines in Europe (Nestlé Nespresso 2016). Across the Atlantic Ocean, Sylvan realized the appeal of a personalized coffee experience in the workplace. He founded Keurig ("excellence" in Dutch) and after much experimentation created K-cups using a Number 7 plastic pod and foil durable enough to withstand the machine's puncture and heat (Gelles 2016). Green Mountain Coffee Roasting Company purchased Keurig in 2007. Sales of Keurig machines and K-cups increased sixfold between 2008 and 2013 (Hamblin 2015), amounting to $4.4 billion during 2013 (Green Mountain Coffee Roasters 2013). In Europe, single-serve coffee is also popular, with Nespresso dominating the market. Coffee capsules currently constitute one in eight coffees sold in Germany (BBC News 2016).

As K-cup consumption climbed into the billions, Keurig/Green Mountain faced growing pressure to find a recyclable alternative. Nespresso already had recyclable pods, while Canada's Canterbury Coffee adopted a 92-percent biodegradable coffee pod (Oatman 2014). Moreover, the National Resources Defense Council questioned the composition of K-cup Number 7 plastic because it might contain polystyrene, a suspected carcinogen and neurotoxin. Keurig declined to reveal the makeup of K-cup plastic, citing proprietary rights (Chen 2015; Oatman 2014).

In 2014, Keurig/Green Mountain announced plans to gradually introduce a recyclable K-cup (Keurig Green Mountain 2014). Recycling K-cups won't be simple; consumers will first have to separate the capsule from the foil cover and empty the coffee grounds. It is uncertain whether consumers will take the time to prepare used capsules for recycling, given that convenience and simplicity are major incentives to adopt K-cups (Gelles 2016). Nonetheless, consumer awareness is growing. Surveys of American single-serve coffee users found that

88 percent had concerns about K-cups' environmental impact; 86 percent expressed interest in K-cup recycling, and 44 percent reported reductions in use (Mintel 2015). Egg Studios captured consumer angst with its mock horror YouTube film *Kill the K-Cup,* which showed a K-cup monster wreaking destruction (Godoy 2015), and spawned Twitter traffic with the hashtag #killthekcup. In Europe as in the USA, coffee capsules have raised concerns. The city of Hamburg, Germany, banned use of single-serve coffee in government buildings early in 2016 to support sustainable consumption and wise use of taxpayer money (BBC News 2016).

### Considering Waste through Life-Cycle Assessment

One of the puzzles of sustainability is trying to figure out how different types of production processes and consumption choices compare in terms of the environment and waste generation. Life-cycle assessment research aims to understand the amount of resources used, including water and energy, and how much is wasted from the beginning of production to final consumption or disposal. Several studies have compared different forms of coffee preparation to discover which requires the fewest resources and generates the least waste. In comparing coffee capsules, drip filter coffee preparation, and soluble (instant) coffee, at least one study found that instant coffee uses less water and energy despite the immense amount of energy required to create water-soluble dried coffee during the manufacturing phase. Instant coffee requires less quantity to make a cup, needs only minimal equipment (a spoon, cup, and hot water), and typically comes in recyclable/reusable glass containers (Humbert *et al.* 2009). When considering K-cups and espresso capsules, Humbert *et al.* (2009) found that they tend to use less water than drip filter coffee, because drip filter coffee makers can waste water if leftover coffee is thrown away, and water is needed for washing. Moreover, drip filter coffee makers may keep coffee warm on a hot plate, which requires energy beyond that used by coffee capsules (Quantis 2015). The amount of coffee per cup also matters because coffee production consumes large amounts of water during the harvest to separate the coffee cherry from the bean. Therefore, whichever method of coffee making requires the least amount of coffee grounds will reduce proportionally the water and energy expended during coffee production and processing. Humbert *et al.* (2009) concluded that soluble coffee used the least amount of coffee, followed by coffee capsules. A Quantis study (2015), however, estimated that drip filter coffee makers and single-serve machines use similar amounts of coffee, recognizing variability in consumer behavior. With careful use of water and energy, the drip filter method can be comparable in efficiency to coffee capsules, which generate piles of garbage for landfills.

Life-cycle assessment endeavors to account for all costs and resources used, but reliable estimates across every stage of production and consumption prove difficult. Nonetheless, life-cycle assessment can reveal hidden environmental costs in consumer coffee choices. It would be useful to see life-cycle assessments for other forms of coffee making, such as French press and Italian stovetop espresso makers. Most consumers, however, report that their coffee-making choices relate mainly to flavor, quality, and convenience rather than environmental considerations (Kaleidoscope 2015).

### Coffee Shop Efforts to Reduce Waste

Today many coffee shops are trying to encourage customers to use refillable cups and tumblers. Independent and chain coffee shops alike have been offering discounts (typically 5 or 10 cents per cup) to customers who bring their own mugs, and many ask whether customers want a take-away paper cup or prefer a mug to drink in the restaurant. Yet relatively few consumers have adopted reusable cups. Starbucks has received intense attention for its corporate policies toward waste and recycling, and it has made progress to reduce and recycle paper cups and other waste in its stores (Starbucks 2015). Under customer pressure, it has been using paper cups with recycled content since 2006, with a goal of 100-percent recycled content by 2020 (Starbucks 2016a). Meanwhile, Dunkin' Donuts stores are transforming from foam cups to plastic and paper due to regional bans on Styrofoam and consumer concerns (Dunkin' Donuts 2016; Satran 2015). In 2013, Starbucks introduced a $1 reusable cup; with Starbucks' 10-cent discount, each cup would pay for itself after 10 uses. The program temporarily increased customer use of refillable tumblers to 2.5 percent of sales, then declined. By the end of 2014, the use of personal tumblers had remained nearly flat at 1.8 percent, which still represents 47.6 million paper cups saved (Starbucks 2015). Even with discounts for bringing their own mugs, customers' adoption of reusable mugs remains low across the USA. Why is it so difficult for customers to bring along a reusable mug?

Here in the USA, consumer preferences, habit, and psychology play important roles. Consumers strongly appreciate convenience, and carrying along a reusable mug requires more effort than picking up coffee in a disposable cup. Furthermore, humans tend to prefer the status quo when confronting a complex decision that requires synthesizing dispersed and sometimes-contradictory information; it's easier to continue doing what you already do. A recent study showed that this tendency relates to how the human brain works, and discovered that a particular circuit in the brain becomes active when people decide to reject the status quo (Fleming *et al.* 2010). While we are learning more about the neurological aspects of behavioral change, it's not yet clear how or why this circuit becomes active. Much more must be learned to understand the circumstances in which brain processes lead to behavioral change. Other researchers hypothesize that cultural values need to change for fundamental behavioral change (Deneulin, 2011; Leiserowitz *et al.* 2006). In examining people's attitudes toward wildlife conservation over time across the USA, one study found that modernization processes appear to be influencing values toward greater concern for natural and social environments (Manfredo *et al.* 2016). The researchers suggest that it is possible for groups to intentionally change their values and behavior, but at the same time counteracting social forces could compromise such efforts. These results apply well to the challenge of reducing coffee waste: There are many interacting and contradictory aspects of coffee-related waste, and each coffee-making method offers advantages and drawbacks. Many consumers find it difficult to identify an optimal course of action given conflicting information, while balancing desires for convenience and efficient time use with environmental and social concerns.

## Waste Reduction on College Campuses

> *Campus ecology can protect unique natural resources, conserve dwindling supplies of fresh, clean water, slash toxic emissions and train new generations of environmentally savvy citizens.*
>
> National Wildlife Federation 1998

Despite the challenges involved in reducing coffee waste and encouraging wiser consumer choices, environmentally conscientious businesses and organizations have been implementing sustainable practices. Reducing waste can reduce costs, so there can be economic advantages to recycling, composting, and decreasing waste (National Restaurant Association 2014; National Wildlife Federation 1998). College campuses have been leaders in efforts to move toward social and environmental responsibility, and a number of them have made commitments to reduce waste and support sustainability through campus gardens and composting, fair trade purchases, sweatshop-free goods, and reductions in carbon footprints (Linton 2012). A courageous few aim to achieve zero waste. Examination of waste streams from college campuses indicates that 55–90 percent of discarded items could be reused, recycled, or composted (Baldwin and Dripps 2012). Universities in Canada, Mexico, New Zealand, and the USA, among others, have examined their institutional waste streams to understand what is discarded and how it might be reduced (Armijo de Vega *et al.* 2008; Baldwin and Dripps 2012; Smyth *et al.* 2010). For example, students at Furman University in South Carolina conducted a 3-year waste stream assessment study as an environmental service and outreach activity, with faculty guidance and administrative support. Similar to other universities that have invested in waste reduction, Furman University had a student body with high interest in environmental conservation and an administration committed to campus sustainability (Baldwin and Dripps 2012). At Prince Edward University, British Columbia—known as "Canada's Green University"—a study found that disposable hot beverage cups represented 34 percent of the institution's waste stream, and the largest proportion by weight of all drink container types. Over 5,000 cups were sent to the landfill each week, a finding inconsistent with environmental responsibility. An effort to encourage refillable mugs followed (Smyth *et al.* 2010). The University of Wisconsin–Madison was an early leader in promoting refillable mugs. It has sold over 72,000 refillable mugs since the late 1990s, raising over $11,000 annually while reducing trash disposal costs (National Wildlife Federation 1998).

Research on college campuses has revealed that there are important variations in behavior across different buildings and among students, staff, and faculty. Self-reported surveys of behavior suggest that gender, values (including commitment to environmental conservation), past experiences, general environmental knowledge, and access to recycling containers all interact to influence recycling behavior. At the same time, researchers acknowledge that people's behavior can differ from what they report in surveys (Kelly *et al.* 2006).

Creating social and behavioral change within any society, business, or organization requires sustained and strategic effort to overcome resistance and preferences for the status quo. Examples from successful waste-reduction programs highlight several key components, including enthusiastic participation of students, faculty, and staff. Administrators can provide critical support through leadership decisions such as proactive policies, financial support for waste studies and new infrastructure, or incentives to encourage change. At the University of Massachusetts–Amherst (UMass), student commitment and leadership led to a university-wide commitment to move toward zero waste. One of the student leaders, Arianna Moscone, wrote her senior thesis on the experience, and summarized key information to assist other student-led efforts to create a zero-waste campus (Moscone 2015). She presents and explains 10 "Steps to Zero Waste":

1. Source Separation
2. Door-to-Door Collection
3. Composting
4. Recycling
5. Reuse and Repair
6. Waste Reduction Initiatives
7. Economic Incentives
8. Introduce Zero Waste Research

9. Demand Better Industrial Design
10. Respect for Waste Management Workers

The process at UMass points to the critical importance of dedicated, collaborative effort to move toward profound changes in individual and group behaviors. Each step to change institutional patterns of waste posed challenges, and each step continues to be a key component of steady progress toward achieving zero waste. Thus UMass has attained a critical mass of committed individuals, a consensus on objectives, and specific steps to take. The administration stepped up with funding to improve campus infrastructure for waste reduction, composting, and recycling, including support for research projects to assess campus waste streams (Moscone 2015). Efforts to create fair trade campuses involve similar organizational principles of bringing together diverse actors including administrators, building agreement, and implementing specific policies and practices (Linton 2012).

## Thinking Forward

Environmental responsibility needs to involve multiple levels of action to make a difference. Individual behaviors serve as an outward expression of a personal commitment to reducing waste and moving toward greater social and environmental responsibility. But one person's decision to stop using disposable coffee cups, reduce and recycle packaging, and use water and energy wisely makes little more than a symbolic gesture unless others make the same choice. True influence to change society comes through collective action: working together toward a shared goal. Change comes when individuals join with other like-minded people to start using their own refillable mugs, reduce waste, and follow through on their concern to recycle as much as possible. A few people can inspire and teach others by their example, and they can become hundreds and then thousands of people who change their habits. Eventually, a huge difference is made in landfills and waste that would otherwise wash into the oceans. Even greater impacts result when people convince local, state, and national governments to create laws and provide funds for better recycling infrastructure and initiatives to encourage wiser use of natural resources. We have a good example of wise policies for waste reduction in the bottle bills found in 10 US states and Guam (www.bottlebill.org/legislation/usa.htm). Bottle bills charge consumers a few cents of deposit for each recyclable plastic bottle or aluminum can they purchase. Consumers can return the empties to reclaim their deposit. If people discard bottles, others have an incentive to retrieve and return them for the deposit. Empty beverage bottles typically comprise 40–60 percent of litter, and states with bottle bills have seen overall litter reduced by 69–84 percent, with important reductions in landfill waste as well (www.bottlebill.org/about/mythfact.htm).

As discussed above, most people prefer to maintain the status quo, therefore change is always a challenge. For people whose livelihoods, power, or wealth depend on maintaining the status quo, it can be particularly difficult to participate in anything that could threaten their position. Ideally, democratic procedures of open discussion, negotiation, and compromise can lead to broad civic engagements that include all groups in a society, and find approaches to address problems fairly and successfully. In reality, many political decisions are made by privileged social groups, who may resist change or reproduce social inequities and problems that disproportionately affect less privileged groups. Although it is hard to create social change, there are many examples in which ordinary citizens have come together to work collectively toward solving problems. We only need to think back over the past century in the USA to realize that tremendous social advances have occurred through collective action: Women gained the right to vote in 1920 after more than a half century of struggle by the suffragettes; the Civil Rights Movement of the 1960s struck down segregation laws and inspired societal transformations against the injustices of racism. In 1995, environmental groups compelled the USA to ban chlorofluorocarbons that exacerbate the hole in the ozone layer. Moreover, health advocates have used the courts and political activism to force tobacco companies to acknowledge the mortal dangers of cigarette smoking and pay restitution to victims. In the present, gay, lesbian, bisexual, and transgender individuals are gaining rights to marry and live openly. The underlying problems that compelled people to work for these changes have yet to be resolved, but progress is being made. By comparison, shouldn't the challenges of consumer coffee waste and recycling be relatively simple to address?

### Questions for Reading, Reflection, and Debate

1. What are the advantages and disadvantages of coffee capsules?
2. In your own experience, what is the most common form of making coffee? If you drink coffee, what method(s) do you use to make it? Why did you choose the method you use?
3. Given that coffee shop chains have had little luck encouraging customers to adopt reusable cups, what do you think would have to change to reduce consumer dependence on disposable goods (not only paper cups but also other disposable items, like plastic water bottles)?
4. Have you ever been involved in a group action to try to change a policy or problem? What challenges did you encounter, and how were they addressed?
5. Is there something you would like to see changed in your own community or on your college campus? If so, what is a specific action (or idea) that might help foster change?

# 10

# IS COFFEE GOOD OR BAD FOR YOU?

## Debates over Physical and Mental Health Effects

Coffee has been the subject of medical interest since it came to the attention of Arabian society. Avicenna (980–1037) may have given the earliest written description of coffee's effects: "It fortifies the members, it cleans the skin, and dries up the humidities that are under it, and gives an excellent smell to all the body" (Wild 2004:30). Early physicians acknowledged coffee's energizing effects and treated coffee as a useful drug. As coffee spread into Europe, societies varied in whether they saw it as a cure for disease or a threat to health. Throughout the twentieth century and into the present, coffee has been suspected as a factor in numerous diseases, including nearly every ill of modern society—heart disease, high blood pressure, high cholesterol, cancer, and reproductive problems. Hundreds of studies have examined the possible dangers of coffee, and many studies failed to reach clear conclusions or contradicted each other.

Why are the health effects of coffee and caffeine often unclear and controversial? The following discussion examines the complexities that have made it difficult for scientists to understand how coffee affects human health. It considers some of the risks and benefits that appear to be well supported by recent research, and asks whether social contexts also influence our perceptions of coffee's influence on health.

### Complications in Studying Coffee's Influence on Health

#### *Chemical Complexity*

The majority of medical research exploring the effects of coffee on health has focused on caffeine. But caffeine is only one of the pharmacologically active compounds in coffee that may influence human health. Coffee contains a complex combination of carbohydrates, lipids (fats), proteins, amino acids, nucleic acids, vitamins, inorganic compounds, alkaloids, and volatile compounds. In all, coffee contains more than 1,000 different chemical compounds; around 800 are volatile chemicals that dissipate rapidly. Coffee's rich aroma results from the mixture of about 50–60 volatile chemicals released during brewing. Arabica and robusta coffees have important differences in their chemical composition.

For example, robusta coffees contain twice as much caffeine as arabicas (Spiller 1984). Coffee's chemical complexity complicates research, and many uncertainties persist about its physiological effects (Bandyopadhyay *et al.* 2012; Esposito *et al.* 2003).

### *Variations in Roasting, Brewing, and Consuming*

The diversity of methods to prepare coffee for drinking adds further complexity to assessing coffee's composition and possible ramifications for health. Roasting causes compounds to break down and interact, and roasters select different lengths of time and temperatures depending on the characteristics of the beans. Then people brew coffee in a variety of ways. Filtered coffee removes most of the fatty compounds in coffee, but boiled, French press, and espresso coffees do not. Early studies addressing the effects of coffee on cholesterol failed to account for the type of brewing. Studies in Europe, whose residents more often consume French press, boiled, and espresso coffees, showed that coffee raised cholesterol. Comparable studies in the USA, where filtered coffee is common, showed little or no association. Researchers sought to explain the differences, and discovered that cafestol and kahweol, fatty compounds in coffee, boost cholesterol (Weusten-Van der Wouw *et al.* 1994). The lesson is that variations in blending, roasting, and brewing lead to differences in the chemical composition of the coffee, which can be difficult to control in studies (Esposito *et al.* 2003; Nilsson *et al.* 2010). In addition, few studies control for how strongly people brew their coffee, or the sugar or flavorings added, although dairy is usually tracked because of its fat content. In other words, all cups of coffee are not equal, and researchers find it challenging to control for and assess the differences.

### *Variations in Individual Physiological Sensitivity*

Individual reactions to coffee and caffeine can vary greatly. Drawing general conclusions about the effects of coffee on individuals is problematic when the sample is small, which is often the situation in case-control studies that match people suffering from a disease to similar people who do not have the disease. Even cohort studies, which follow a large group of people—a *cohort,* which is supposed to represent the general population—over time may be problematic because the people who agree to participate may be different from those who do not. Another conundrum is that scientists still lack detailed knowledge of the variability in people's responses to coffee, and how it may influence study outcomes. While the vast majority of the population tolerates caffeine very well, a small proportion is highly sensitive or allergic to it (Hinrichs *et al.* 2002; Infante *et al.* 2003). Some find that even a small amount of caffeine results in a jittery feeling. Caffeine stimulates the brain in ways that can exacerbate feelings of anxiety, and anxious people tend to drink less coffee. Personality type can also influence individual responses to caffeine; extroverts appear more likely to get a beneficial boost than introverts (Little 2014). People who are "supertasters" are three times more sensitive to bitter flavors than the average person. They appear to be more at risk for developing certain diseases because they avoid healthful but bitter-tasting vegetables, like broccoli, as well as caffeine (S. Carpenter 2003). Variations in individual responses to other chemical compounds in coffee may also exist, and individual physiologies or genetic dimensions may shape personal risks or benefits of consuming coffee in ways that we have yet to grasp.

### *Flawed Research Designs*

Given the many variabilities in coffee beans, preparations, and individual physiologies and behaviors, scientists face many challenges to develop research designs that can isolate the effects of coffee or caffeine on health. A series of studies through the mid-twentieth century implicated coffee in cancer, heart disease, and other health problems. Subsequent work found that many of these studies had serious design flaws. One type of flaw occurs when researchers fail to control for something that confounds test results. This flaw tends to occur when scientists don't know that a significant association exists between two independent variables, one of which is studied while the other is overlooked. For example, a number of early studies exploring coffee's effects on heart disease and cancer failed to distinguish between smokers and nonsmokers. Many smokers drink coffee; smoking and coffee consumption is highly correlated. Initial studies of coffee drinking in the USA showed that study participants had increased incidence of certain diseases, and it was blamed on coffee. When later studies followed smokers and nonsmokers separately, it became clear that smoking, not coffee drinking, led to greater risks (Harvard Health Publications 2004). Sometimes a study accidentally excludes a known, relevant variable. A single study suggested that filtered coffee could boost cholesterol significantly among some people. The results had to be discarded when researchers realized that they had not accounted for the cream that subjects added to their coffee (Gardner *et al.* 1998).

Design flaws give scientists nightmares. Great effort goes into planning research to select representative samples and control for interactions that may confound results. But because many things remain uncertain about how different kinds of coffee interact with behavioral, physiological, and psychological aspects, it is not possible to control for everything, and design flaws may occur. Fortunately, science depends on reliable and replicable results. The history of research on coffee and health shows that studies to replicate results can reveal design flaws, and the process of verifying and testing results leads to better understanding.

### Evidence that Coffee Contributes to Certain Diseases and Problems

Although many uncertainties endure in assessing coffee's influence on health, coffee does appear to pose risks for a few diseases and health problems among certain groups. To the best of current knowledge, coffee and caffeine present risks for reproductive health, and for infants and children. Several studies indicate that couples who consume high quantities of caffeine have greater difficulty conceiving. Women who consume over 300 milligrams per day of caffeine (more than three cups of coffee) may face greater risks of miscarriage and having babies with low birth weight or unusually fast heartbeats (cardiac tachyarrhythmia). Given the uncertainties and possible consequences for infants, many doctors advise keeping coffee consumption low during pregnancy (Harvard Health Publications 2004; Winick 1998).

Studies on the effects of caffeine in children have found increased anxiety, nervousness, and restlessness. Children who ingest more caffeine sleep less, which may affect learning, thus children's caffeine consumption should be limited (Mejia and Ramirez-Mares 2014; Nawrot *et al.* 2003). Suspicions that caffeine might be related to Attention Deficit Disorder generally have not been supported by controlled studies (Higdon and Frei 2006).

Several diseases may be exacerbated by coffee among people with nutritional deficiencies. For example, coffee is associated with bone loss, and coffee drinkers with calcium and vitamin D deficiencies face a greater risk of hip fracture. People taking iron supplements should avoid drinking coffee, because caffeine interferes with iron absorption. Certain drugs also interact with coffee and change the body's ability to metabolize caffeine, increasing the chances of caffeine-related side effects such as jitteriness (Mejia and Ramirez-Mares 2014; Higdon and Frei 2006).

### Evidence that Coffee May Reduce Risk of Certain Diseases

In recent years, evidence has been emerging that coffee may reduce the risks of certain diseases, including type-2 diabetes, Parkinson's disease, liver diseases, and cancer of the uterine endometrium. The results were unexpected, and they have received much attention and examination from follow-up studies.

The first evidence showing that coffee drinking may reduce the incidence of type-2 diabetes came from a cohort study in Norway in 2002. Subsequently, over 20 studies in the USA, Japan, and Europe have replicated the results, imparting greater confidence that the results are not due to confounding factors.

The risks of type-2 diabetes appear to fall proportionally as coffee consumption increases, including decaffeinated coffee (Cano-Marquina *et al.* 2013; Higdon and Frei 2006).

Over the past 30 years, gradually accumulating evidence suggests that regular consumption of coffee reduces the risk of Parkinson's disease. This illness causes tremors and uncontrollable shakiness; actor Michael J. Fox is among those who suffer from it. Caffeine's effects on neural pathways in the brain appear to protect neural functions, but precise understanding of the causal mechanism that inhibits Parkinson's disease requires more research (George *et al.* 2008; Noyce *et al.* 2012).

Studies have been fairly consistent in showing that the risks of liver cancer and cirrhosis decline as coffee consumption increases. Researchers are not yet sure why this relationship exists, but they hypothesize that coffee affects the chemical processes in the liver to reduce damage caused by alcohol consumption, hepatitis infections, and other risk factors. A study in the USA involving 120,000 men and women found that risks of death from alcoholic cirrhosis declined 22 percent for each additional cup of daily coffee intake, particularly for people with existing risk factors for liver diseases (Cano-Marquina *et al.* 2013; Homan and Mobarhan 2006).

More broadly, the World Health Organization announced in 2016 that drinking coffee does not appear to be associated with cancer. The language remained cautious but concluded that despite extensive research on many cancers, evidence is lacking that coffee is carcinogenic in humans. Instead, an exhaustive review of scientific studies suggests that coffee has protective effects against liver cancer and cancer of the uterine endometrium (Loomis *et al.* 2016).

Current studies point out that coffee contains antioxidants, which may help explain coffee's apparent protective effect against certain cancers and diseases. Interestingly, cafestol and kahweol are among the antioxidants in coffee, thus the tendency of these chemicals to increase serum cholesterol needs to be balanced against their antioxidant benefits (Bandyopadhyay *et al.* 2012; Cárdenas *et al.* 2011).

## Ambiguous Intersections of Science, Society, and Individual Experience

Despite over 500 years of medical attention to coffee, we have many questions and uncertainties about the ways coffee influences physical and mental health. We still know very little about how coffee's many pharmacologically active ingredients interact with each other and with individual body chemistry. More important, individual behaviors (exercise, diet, alcohol consumption, and smoking) and the contexts of people's lives (exposure to stress, environmental contaminants) appear to be more closely implicated with susceptibility or resistance to disease than coffee consumption. Consensus exists that members of special-risk groups should limit their coffee and caffeine intake, especially pregnant women, children, and people with caffeine sensitivities. Beyond these recommendations, the medical establishment now agrees that moderate coffee consumption is unlikely to be harmful for healthy, well-nourished people; and it may reduce risks for some diseases (Harvard Health Publications 2004; Loomis *et al.* 2016). A government advisory panel announced that drinking up to five cups of coffee could be part of a healthy lifestyle, and coffee has even been described as a health food in popular media (K. Campbell 2016; LaMotte 2015).

It is curious that growing attention to coffee's possible health benefits comes as coffee shops experience a high level of popularity, and specialty coffees have become increasingly prized among privileged groups in society. Relatively little public discussion focuses on continuing medical uncertainties, or considers caffeine addiction as a concern, even though medical science shows that caffeine is a drug with numerous physiological effects (M. Carpenter 2014). The case of coffee reminds us that perceptions of risk and notions of health are constructed through sociocultural processes. The fact that our society drinks large amounts of coffee has little to do with our understanding of its possible effects on health, but much to do with specific political, economic, and cultural contexts.

### Questions for Reading, Reflection, and Debate

1. Do possible health risks of coffee consumption influence your decision to consume (or avoid) coffee? Or possible health benefits?
2. Have you ever read a media report about scientific findings that seemed to contradict other reports? What might be the reasons for such contradictions?
3. How do scientists try to prevent or correct for confounding factors when designing and conducting research?
4. How might coffee's current popularity and prevalence be influencing how we view coffee's risks and benefits?

# Part III

# COFFEE PRODUCTION AND PROCESSING

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# 11

# PLANTING AND CARING FOR COFFEE

*It's 5:00 a.m. and Fabio and his younger brother Bernardo leave their adobe home to walk to their coffee fields in the mountains. Rain fell in the night, and they slide on the muddy paths as they climb the steep slopes. They turn on a flashlight where the path is carved into the edge of a cliff along a 100-foot drop-off; otherwise they walk in darkness to save the batteries. Dawn breaks as they reach their fields. Earlier this spring, they had cleared land to expand the plantation; they own about a half acre of mature coffee and plan to double that amount in the coming years. Fabio kneels at the edge of a seedbed where coffee seedlings have grown about 4 inches high. The seedlings have two leaves (dicotyledon stage) and need to be transplanted before they crowd each other. With great care, Fabio curves his fingers into the earth around a seedling, grasps the stem, and lifts it from the moist, black soil. Shaking off the clinging soil, he examines the seedling; it must have a single, straight tap root to grow into a healthy coffee bush. The seedling passes inspection and he lays it in a tray. He continues to other seedlings, tossing those with crooked or split roots to the ground. Meanwhile, Bernardo fills 8-inch-high plastic bags with soil from a loamy pile; they had sifted the soil to remove stones and roots. He aligns the filled plastic bags in rows under an awning of banana leaves that serves as a nursery, and uses a stick to press a hole in the middle of each bag. When Fabio has filled a tray with seedlings, they work together to place a seedling in each plastic bag and press it gently into the soil. At noon, they break to eat a lunch of tortillas and black beans, reheated over a small fire. When they finish transplanting the seedlings, they water each one with a hose that brings water from a nearby stream. Then they return down the mountain paths, which have dried in the day's heat, and arrive home as the sun sets.*

From the time farmers plant coffee seeds, 3 to 5 years pass before the plant begins to produce coffee beans. Coffee producers must make major investments of time and resources for several years without any return, and then they must maintain the perennial crop. The significant delay between planting and the first harvest not only constrains producers' income flow, it also contributes to the variability in global coffee supply, and carries implications for the social and environmental sustainability of coffee production. In this chapter, we will examine coffee production and begin to consider the challenges and conundrums that it poses for producers, social relationships, and national economies.

## Planting Coffee: Growing from Seeds or Grafting

In the first 6 months, coffee seedlings need to grow in moist soil and usually do best under even shade. Some differences exist between the two main commercial species of coffee, *Coffea arabica* ("arabica") and *Coffea canephora* ("robusta"). Arabica varieties tend to be more sensitive to moisture and temperature, and grow well from seeds; arabicas represent 60–70 percent of the world's coffee production (Thurston 2013). Robusta varieties, representing the remainder of world production, are more resilient to weather variability, but grow better when grafted onto a host seedling or established plant (Eskes and Leroy 2009; Wintgens and Zamarripa Colmenero 2009). The selection and preparation of seeds or sprouts for grafting requires experience, training, and, if possible, high-quality seeds. Farmers who plant robusta varieties usually start with grafted seedlings in a nursery (Wintgens and Zamarripa Colmenero 2009). Farmers who grow arabicas plant seeds in a seedbed, then transplant the seedlings into a nursery, just as Fabio and Bernardo did (Figures 11.1 and 11.2). In the seedbed and nursery, farmers have more control over moisture and shade to nurture young plants. When coffee seedlings in a nursery have six to ten pairs of leaves, they can be transplanted into a prepared field to grow to maturity (IHCAFE 2001). Although some farmers plant seeds directly into fields, that method involves more seeds and seedling loss, and requires that farmers weed and maintain a large area of land during germination and early development (Wintgens and Zamarripa Colmenero 2009). Regardless of the method used, planting in a field needs to occur during the rainy season.

## Caring for Coffee Plants

To ensure healthy growth, coffee plants need to have adequate water, nutrient-rich soil, and a temperate climate. Coffee farmers carefully select the sites for their seedbeds, nurseries, and plantations, paying attention to soils, wind exposure, temperature variability, water availability, topography, elevation, and risks of pests and diseases. Coffee can grow well on steep slopes, but soil erosion needs to be controlled. While robusta varieties tolerate drought and weather fluctuations much better than arabicas, both will be stunted or killed if temperatures fall near freezing.

Coffee must be weeded regularly to prevent weeds from competing with plant growth and production. Weeding requires manual labor. Use of herbicides greatly reduces the effort required, but workers still must spray the chemical

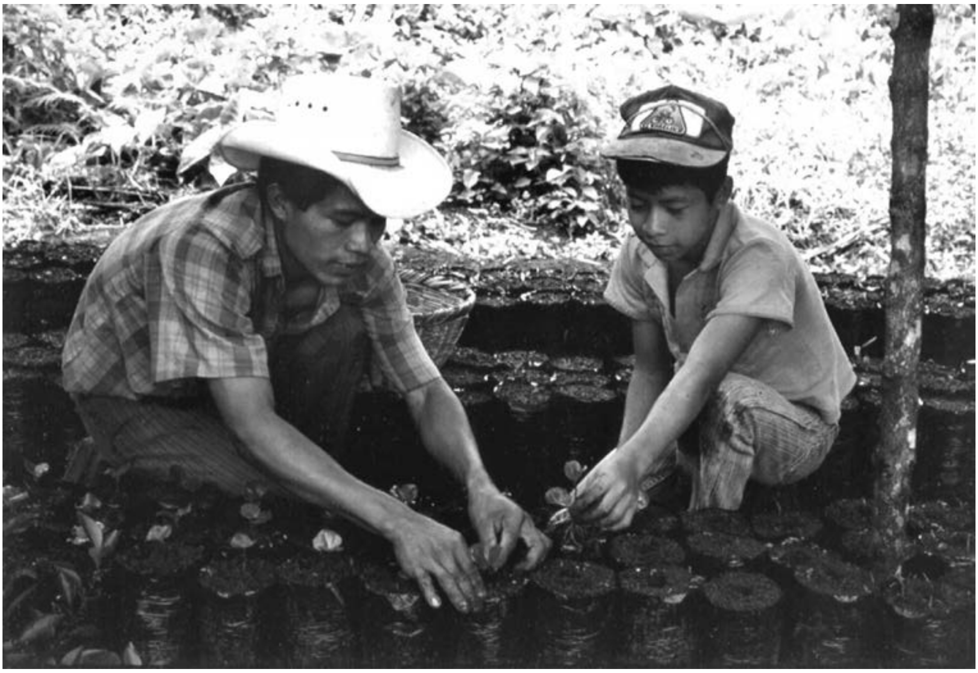

*Figure 11.1* **Transplanting coffee seedlings (**Source: Catherine M. Tucker).

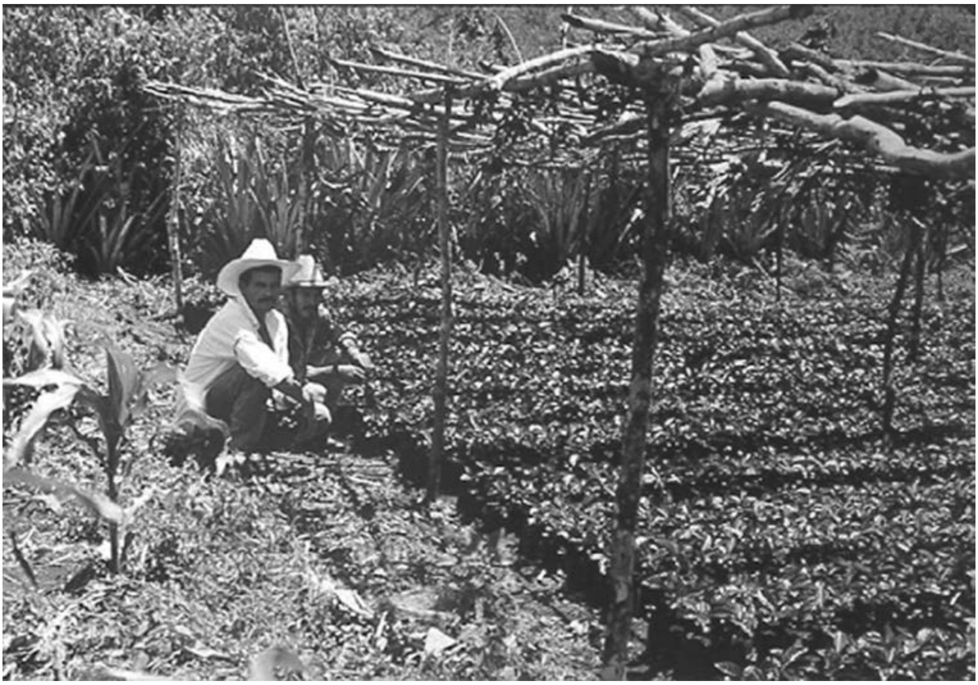

*Figure 11.2* **Coffee nursery** (Source: Catherine M. Tucker).

around each plant. The work to maintain coffee plantations continues throughout the year with weeding, fertilizing, observing plant development, and checking for signs of disease or infestations. As coffee plantations mature, growers must invest extra time trimming bushes and removing dead or damaged branches to maintain an even shape and productivity. When bushes die or suffer excessive damage, they need to be replaced. After about 8 years, the productivity of hybrid varieties begins to decline, although this varies with environmental conditions

***Table 11.1*** **Steps in Typical Arabica Coffee Production and Maintenance**

| *Step* | *Timing* | *Comments* |
|---|---|---|
| Planting seeds | | Seeds are planted in a shaded seedbed during the rainy season. |
| Transplanting seedlings | 3–6 months after planting | When seedlings have two leaves, they are transplanted to small bags or individual containers. |
| Planting saplings in the plantation | 12–18 months after transplanting | Saplings typically are planted in fields when they have 6–8 leaves. |
| Weeding | Every few months for young coffee plants; 1–3 times/year for mature plants | Weeding varies according to grower preferences, labor availability and costs, and the amount of shade in the plantation. |
| Fertilizing | 0–3 times/year | Chemical fertilizers are usually administered during critical growth periods, especially right before harvest; organic fertilizers may be applied at any time but usually before and after the harvest. |
| Administering herbicides, nematocides, pesticides, fungicides | 0–3 times/year | These are used in conventional production; a few naturally occurring chemicals are approved for organic methods. |
| Trimming | As needed | Trimming removes broken or damaged branches and shapes growth. |
| Pruning | Every 8 years | Hybrids need periodic pruning to maintain good production; the actual timing varies by producer. |
| Replanting | Every 25–35 years; more frequently if coffee plants suffer damage | Traditional varieties do not require replanting if grown in shade; hybrids have a limited lifespan but survive longer when grown in shade. |

Source: Catherine M. Tucker

and shade density. If farmers hope to retain production levels, they must prune the plants severely, allowing them to sprout back from the base of the stems. With careful and consistent maintenance, a hybrid coffee plantation can be productive for 20–30 years (Table 11.1). Traditional varieties live much longer, but they produce sparsely and grow tall (2–4 meters). Farmers who depend on coffee exports for their livelihood prefer hybrid varieties because they produce much more coffee and usually grow less than 2 meters high, which makes it easier for pickers to reach the cherries.

### The Inevitability of Risk

The decisions about how, where, and when to plant coffee can determine the success or failure of coffee production. Farmers who know their land, the climate, and the soils well, and understand the needs of coffee plants, are more likely to make wise decisions. But farming presents many risks, and there are no guarantees even for an experienced farmer. Even if they make good decisions, farmers cannot control the weather, market prices, or political–economic processes that influence the fate of the harvest and the farmers' livelihoods. More than most crops, coffee experiences volatile prices, and coffee farmers cannot predict whether the prices at harvest time will cover their costs or leave them in debt. Moreover, the best-quality coffee not only depends on the care during planting and growth, but expert treatment during harvesting and processing.

### Questions for Reading, Reflection, and Debate

1. What are the main differences between robusta and arabica coffees?
2. What factors likely influence whether a farmer decides to plant robusta or arabica coffee? How does a region's climate influence the decision?
3. What risks do coffee farmers face? What kinds of risks or uncertainties may be greater with growing coffee than many other crops?

# 12

# HARVESTING, PROCESSING, AND INEQUALITY

*Amalia and her sister, father, and older brother get up before dawn in the workers' bunkhouse. They fold the two blankets they share neatly on the wooden planks that serve as bunks. They slept in their clothes; each of them has one change of clothing for the 2 months of coffee picking on Don Tulio's coffee plantations in western Honduras. Their home is a day's truck drive away. Amalia and her family share the bunkhouse, two latrines, and one water spigot with 40 other workers. They jostle with others as they get into the breakfast line. As they walk by the kitchen door, two women are forming and throwing tortillas onto a hot griddle to cook. A young girl hands each worker four tortillas with a spoonful of mashed black beans and pinch of salt on top. Amalia holds out her own plastic cup to another young girl, who fills it with hot, sweetened coffee. Then Amalia sits on the ground with her family to eat quickly before the tortillas cool. They will eat the same thing for lunch and supper. Don Tulio provides food for his workers, although he factors the cost in their wages. As the sun comes over the mountain peaks, every worker picks up a large 5-gallon bucket. Amalia ties a bandanna over her head to keep her hair out of her eyes. The foreman breaks them into groups and assigns them a section of the plantation to work.*

*Early morning mist hangs over the plantation, and dew drips on Amalia's shirt and dampens her sandaled feet as she begins picking the reddest cherries from the bunches of green and ripening cherries that crowd each branch. The branches sag with the weight of ripening coffee. Amalia has to bend over to reach the lowest ripe cherries, and stretch to her toe tips to reach the ones on the top branches. She tries to pick as quickly as possible, without getting leaves, twigs, and green cherries in her bucket, so the foreman won't deduct from her wages. After she fills her bucket, she carries it on her head to the collecting center. She gives the foreman her name as she pours the red cherries into the large receptacle that feeds into the pulping (hulling) machine. She takes a quick gulp of water from the water spigot, then returns to picking cherries. By mid-morning, the mist has burned off and the temperature rises in the sun. Sweat drips into Amalia's eyes, and she ignores the gnats and flies that pester her. She picks quickly; on an average day, she harvests five buckets of cherries. In a good year for coffee prices, she will earn about a dollar for each bucket.*

> *In a poor year, the price could be less than 40 cents per bucket. Each bucket she picks is counted by the foreman; she will be paid a lump sum at the end of the harvest. If she needs anything, she will buy it on credit at Don Tulio's* pulperia *(a small store), and it will be subtracted from her wages. When she pools her earnings with her family for their 8 weeks of work, they hope to have enough money to buy fertilizer for their corn and bean fields for the next planting season, and perhaps enough to buy school supplies for her younger brothers, who stayed at home with their mother.*

The wages that coffee pickers receive may be their only source of annual income. Workers typically have little education and few employment options. Because coffee growers have many costs, often carry debts, and receive low prices, they find it difficult to increase wages and still make a profit. The average coffee plantation requires about 250–300 workdays ("man-days") of labor per hectare (2.5 acres). About 60 percent of the work occurs during the harvest season (Descroix and Wintgens 2009). To get top-quality coffee, each cherry must be picked individually at the height of ripeness (see Figure 12.1). A cherry contains

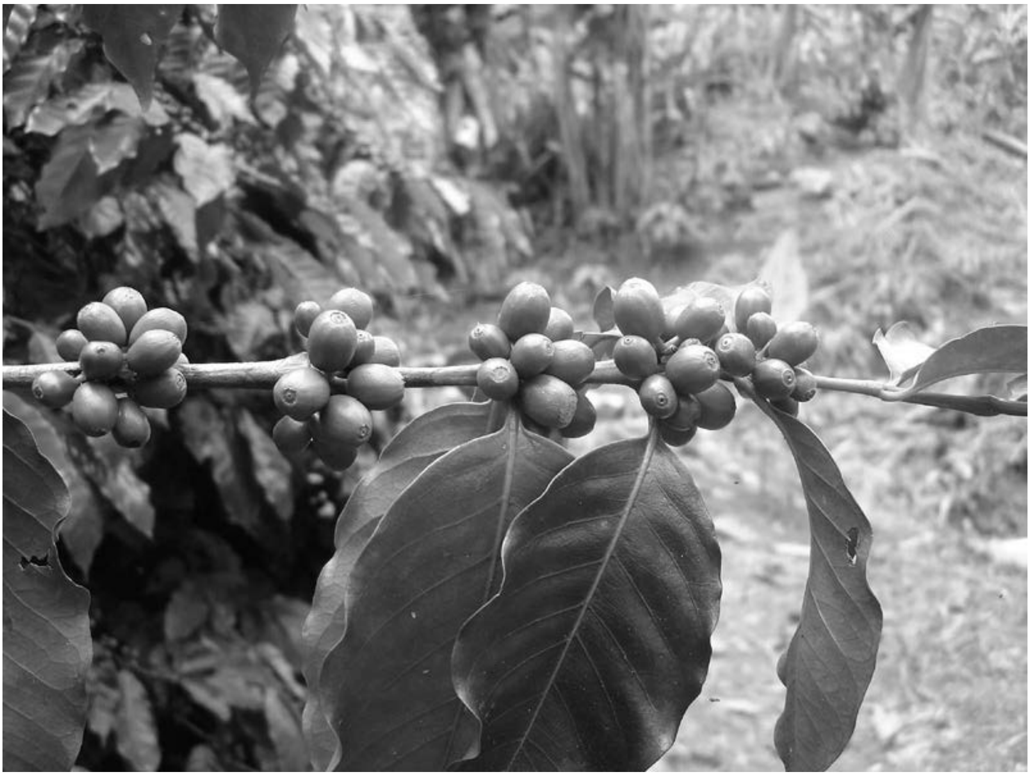

*Figure 12.1* **Coffee ripening on a branch** (Source: Catherine M. Tucker).

two coffee beans (seeds), surrounded by protective layers of skin and parchment. (Figure 12.2). Coffee cherries ripen unevenly across several months, turning gradually from green to yellow to bright red (except for some varieties that ripen to yellow). As a result, bushes must be picked multiple times as cherries ripen if the owners wish to maintain quality standards and get good prices.

Costa Rica gained its fame for high-quality arabica coffee in part due to a nationwide commitment to careful hand picking and quality controls. Robusta coffee can be harvested by machine; this works in parts of Brazil where extensive plantations grow on flat land. But mechanical harvesting takes all cherries at once—ripe, unripe, and spoiled—along with twigs, leaves, and broken branches. The result is low-quality, marginally palatable coffee that is usually used for instant coffee or in cheap blends. Arabica varieties do not withstand machine picking, therefore the plantations that produce the world's best coffee must be harvested by hand. Without careful hand picking, we would not have good coffee to drink.

Securing labor has been a persistent challenge for coffee production around the globe, in part because wages need to be low enough that growers can make

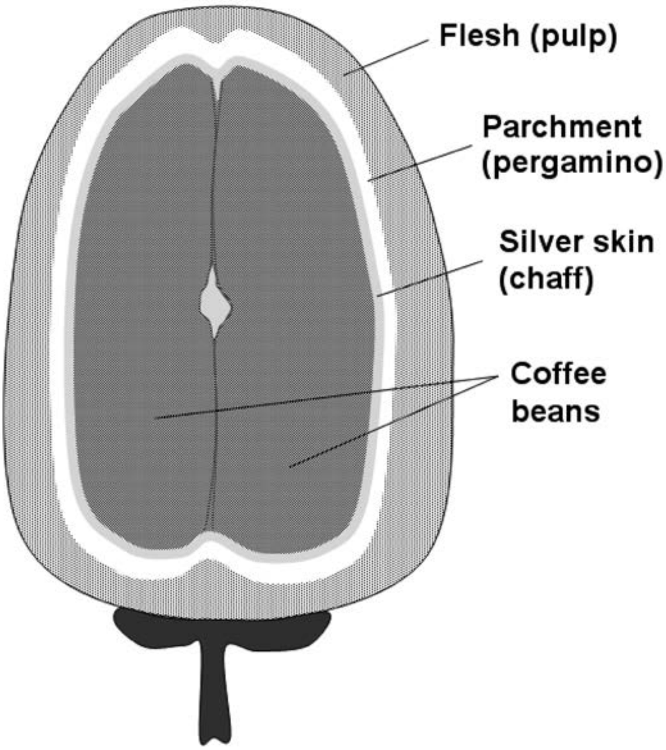

*Figure 12.2* **Diagram of a coffee cherry** (Source: Joanna Broderick).

a profit. Throughout the modern history of coffee, the ways that individual growers, and regional and national governments, addressed the labor "problem" has varied greatly (Roseberry 1991). Labor has been obtained through slavery and debt peonage, migrant labor contracts, hiring local or regional workers, drawing on family and friends, and combinations of these. Government policies in coffee-growing countries have been developed to encourage or compel people to pick coffee. Costa Rica, for example, has scheduled school vacations so students can pick coffee (Sick 2008). Many factors have interacted to shape how growers obtain labor, including ethnic and social-class relationships, political power struggles, land distribution and availability, and the ways that linkages to markets developed (Roseberry *et al.* 1995).

## Smallholders vs. Largeholders: Contrasts in the Organization of Coffee Production

Farmers' options and constraints relate to the size of their plantations as well as the larger socioeconomic and political system in which they live. Producers with more than 5 hectares of coffee typically are considered largeholders; they may have sources of income other than coffee that allow them to spread their risks. Most of the world's coffee producers are smallholders. They differ from largeholders in the amount of land they control, the quantity of capital they invest in coffee, and their labor sources. Coffee can be produced successfully under a wide range of labor arrangements, property-rights systems, and processing methods. Indeed, the organization of coffee production and its components—land, labor, and capital—have proven remarkably flexible and adaptive to local, regional, and national contexts.

All coffee growers share a need for labor, although the sources and the number of laborers required differ. Farmers with a small plot of coffee often meet labor needs with family members, but even they may hire temporary workers during the harvest. Medium to large plantations depend on seasonal labor. Guatemala, Brazil, El Salvador, and Kenya are prominent examples of coffee-producing nations dominated by large plantations, although there are some smallholders. Costa Rica, Colombia, Ethiopia, Papua New Guinea, and Puerto Rico are among the countries where smallholders predominate, although a range of plantation sizes exists. The examples of Costa Rica and Guatemala give an idea of how contrasting coffee-production systems can emerge despite geographic proximity and similar colonial antecedents.

In Costa Rica, a diversified agricultural sector dominated by mestizo (mixed indigenous and Spanish heritage) farmers emerged prior to independence, and constituted the foundation for a smallholder coffee economy. While Costa Rica shared similar government structures and regulations with other Spanish colonial provinces, it was poorer and more distant from the seat of power in Guatemala. Despite a period of post-independence turmoil and instability during the nineteenth century, the government legislated policies that supported smallholders, granted land titles for those who could show prior claim, and recognized rights to organize, form cooperatives, obtain credit, and make contracts with exporters. A growing class of small-scale, modestly well-off coffee producers became established, as did a class of landless workers (Gudmundson 1995). A number of coffee producers made their way into politics and worked from elected office to support their interests.

Costa Rica made early moves to establish production standards and facilitate financing through a central bank (Williams 1994). The government declared that picking coffee was a civic duty. Labor was not coerced by force but encouraged by social norms, patriotism, and familial obligations. These political and social contexts resulted in high-quality coffee and prime pricing on international markets. In the twentieth century, the government started childcare centers in some places to free women for coffee picking. Even so, growers could find it difficult to meet their labor needs; many of their neighbors were too busy picking their own coffee to help. Growers tried to find laborers well in advance of harvest to ensure that they would have enough coffee pickers (Sick 2008). More recently, willingness to pick coffee has declined, along with the importance of coffee for the national economy. Costa Rica has attained one of the highest levels of university education in the developing world. Most young people aim for professional jobs, and migration to cities has reduced the availability of rural labor. Many coffee growers now hire migrant laborers from Nicaragua, who enter Costa Rica as foreign nationals to work for minimal wages with few legal protections. The path of coffee production in Costa Rica, with numerous smallholders who relied on willing rather than forced labor, helped the country to become one of the world's most stable and equitable democracies.

In Guatemala, large coffee plantations owned by elite landowners emerged in the late nineteenth century. They continued a pattern of inequitable land distribution established in the colonial period. As in Costa Rica, coffee growers sought government positions to advance their interests, but unlike Costa Rica, they represented only a small class of wealthy families. Plantation owners needed a labor force, but the majority of the rural population were in highland Mayan communities. The Mayan people resisted leaving their communities, preferring to farm their own lands. Therefore, the government and wealthy landowners continued tactics begun in colonial times that forced Mayans to migrate seasonally. Through the *mandamiento*, Mayan communities had to provide a certain number of laborers each year to work the plantations. For the people who endeavored to resist or avoid *mandamientos*, vagrancy laws were passed to enable police and landowners to sentence Mayas to forced labor (McCreery 1986). The only way to escape the *mandamiento* was through debt to an export plantation owner.

Debt peonage became the primary alternative for many Mayan people and large plantation owners. Coffee growers wanted the assurance that laborers would return year after year; imposing debt provided the means. Mayan people returned home after the harvest with accumulated debt from purchases made at plantation stores, and an advance against their labor for the next harvest. Mayan people endeavored to make the most of their debt peonage, however, by demanding advances at need; their relationship with labor recruiters provided one of their few sources of cash. Debt peonage released them from forced labor and the risk of capture under vagrancy laws, even as it obligated them to a life of unremitting debt (McCreery 1995).

Through government land titling laws, some Mayan communities lost land, others petitioned successfully to maintain or gain land. Thus the government played communities against each other. By exacerbating tensions and jealousies between communities, the government reduced the risk that communities might unite against the elite (Williams 1994). Mayan communities slid deeper into poverty as populations grew, land became scarcer, and people had few options for employment outside of plantations. Even though *mandamiento* and vagrancy laws were repealed in the twentieth century, the lack of education in Mayan communities has continued to restrict residents' employment options. Poverty and debt combine to draw Mayans to plantations to pick coffee, cotton, or sugarcane. Guatemala became one of the world's least equitable countries in part due to the power gained by a small group of largeholder coffee growers who accumulated wealth by coercing labor.

## The Paradox of Coffee Production, Labor Demand, and Development

Coffee growers' dependence on cheap labor creates a paradox for coffee-growing nations and anyone concerned for social justice and human rights. Coffee provides a relatively good, if highly variable, source of agricultural income for rural landowners and governments of tropical countries. Economically, coffee is "the world's most widely traded tropical agricultural commodity" (Thurston 2013:111 quoting ICO), accounting for exports worth an estimated $19.1 billion in 2012/13 (falling from the $23.2 billion estimated for 2011/12) (ICO 2014:9). But too often profits are concentrated in few hands, and many smallholders and workers remain poor despite their toil and effort. To varying degrees in coffee-growing nations, coffee production depends on the perpetuation of an impoverished rural underclass that depends on coffee production to subsist. Even more troubling, cases of human trafficking and forced labor persist in certain nations' coffee sectors (e.g., BILA 2016; Verité 2012).

In general, large plantation systems have been more exploitative of labor than smallholder systems. The larger the plantations held by individuals or families, the more likely it is that great socioeconomic gaps and differences in social experiences will create barriers between the coffee growers and the workers. Most likely, laborers on a large plantation interact with a foreman or manager whose primary concerns are to please the owner and compel laborers to work as hard as possible (Figure 12.3). But because growers must compete for labor, they are also compelled to offer labor conditions that will attract coffee pickers. When laborers have choices, they will work for the growers who pay the most, offer better or more food, or provide assistance in the form of cash advances, transportation, or medical care in case of injury and illness. If producers fail to keep their promises, workers find ways to resist. They may allow leaves, twigs, unripe cherries, and gravel to fall into buckets, or damage coffee bushes with careless treatment. Landowners can respond by increasing supervision and deducting wages, but if laborers become upset, they may simply depart in the

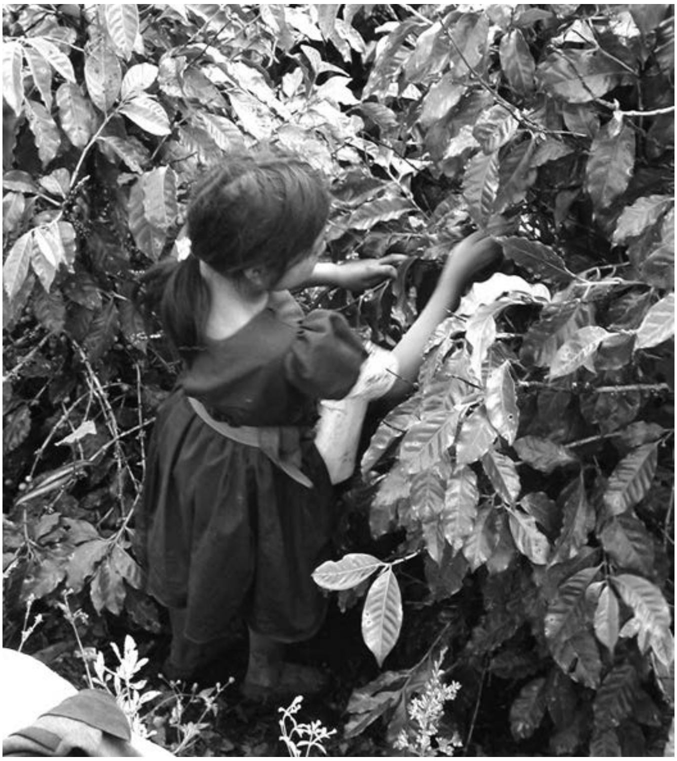

*Figure 12.3* **Child picking coffee** (Source: Catherine M. Tucker).

middle of the harvest, and share their frustrations with other laborers to reduce the landowners' chances of retaining his pickers. They know they can find work picking coffee elsewhere; they also realize that chances are slim that their labor will earn enough to support a better life.

Coffee-growing nations face the conundrum of making progress in development while protecting the export income from coffee and, therefore, maintaining an unskilled rural labor force that will work for the low wages that coffee pays. A number of the world's poorest countries are among the most dependent upon coffee, including Papua New Guinea and Ethiopia with 30 percent and 25 percent of their populations, respectively, dependent on coffee production, distribution, or export for their livelihoods (ACDI/VOCA 2015; World Bank 2014). And some of the world's most inequitable nations have had rural economies characterized by plantations (not only coffee, but also sugarcane, cotton, rubber, or other commodities) with governments influenced by elite plantation owners, as in Guatemala. The historical example of Costa Rica suggests that it is possible for nations to make economic advances through coffee production. Yet the recent dependence of Costa Rican growers on Nicaraguan migrant labor suggests that Costa Ricans are transferring the social costs of cheap labor to Nicaragua, which has its own struggles to attain economic development. Notably, many important coffee-producing countries, including Costa Rica, Papua New Guinea, and Ethiopia, have reported declines in the proportion of their populations involved in coffee production and processing. Low incomes and poor prospects for coffee producers and laborers may be contributing to this shift, especially as urban areas offer more employment options. Will it ever be possible for coffee to be produced fairly, equitably, and with adequate remuneration for owners and laborers? Fair trade coffee represents an effort to answer the question positively; its promise and pitfalls are explored in Chapters 17 and 18.

### Questions for Reading, Reflection, and Debate

1. Why does coffee require large investments of labor?
2. What kinds of jobs have you had? Would you be willing to pick coffee for the wages that Amalia earns? Besides wages, what motivates you to do a job well?
3. Why are coffee pickers paid low wages? Besides the possibility of fair trade, what else could be done to improve wages? For each possible approach to improve wages, what might be the consequences for coffee pickers? For coffee growers? For other interest groups (TNCs, consumers, independent roasters)?
4. If smallholder coffee producers abandon coffee production and sell out to largeholders or corporate owners, what might that mean for coffee quality? For human rights and labor conditions? For availability of specialty coffees? For markets and prices?

# 13

# ENVIRONMENTAL SUSTAINABILITY OF COFFEE PRODUCTION

What does it mean to be "sustainable"? The definition most often accepted comes from the Brundtland Commission of the United Nations, which defined *sustainable development* as meeting "the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Commission 1987). The definition recognizes an incontrovertible reality: Humanity's survival depends on the long-term availability of natural resources—clean water and air, fertile soil, plants, minerals, and other natural materials integral to human life. Coffee is not critical for human life, but its production consumes many natural resources. Soil erosion and deforestation are occurring in many coffee-producing regions, and coffee plantations contribute to these problems. Given these complications, can coffee cultivation be environmentally sustainable?

## Deforestation or Coffee Forests: Sun-Grown Coffee vs. Traditional Agroforestry

Coffee originated in tropical mountain forests. Even today, the world's best coffee grows in shade on mountain slopes. Traditional methods of production mimic the conditions found in coffee's original habitat. The earliest methods of planting probably involved creating openings for coffee in the forest understory by clearing out less-desirable plants, or introducing coffee to orchards where fruit and domesticated trees provided shade. With traditional methods, coffee becomes part of a diverse agroforestry system that could be called a "coffee forest" (Tucker 2008), in which coffee serves as one of many useful plants for food and other goods. Productivity is low, because traditional methods do not aim to maximize coffee harvests for markets. Instead, they spread farmers' risks and reduce their vulnerability to drought, excessive rain, severe storms, infestations, and market volatility. Short of catastrophic events, traditional agroforestry increases farmers' chances that some of their useful plants will survive despite climatic variability, and provide food or marketable products (Alcorn 1990).

Plantation coffee emerged during the past 200 years as coffee became a global commodity. The spread of plantations contributed to tropical deforestation, because plantations are created by cutting down existing forests. The dramatic clearing of Brazil's Atlantic Forest in the 1800s and the recent devastation of Côte d'Ivoire's forests resulted largely from the spread of coffee plantations (Consumers International 2005). As coffee spread around the tropical world, farmers established plantations with shade appropriate to local conditions. Sun-grown arabica coffee is a recent development (robusta varieties tolerate sun). It emerged in the 1970s, as researchers developed high-yielding dwarf hybrids that could survive full sun, and farmers found that planting the hybrids as a monoculture (one crop to a field) yielded more than shade-grown coffee (Saito 2009). The high productivity of sun-grown coffee led to its rapid adoption, especially among large-scale coffee producers who could afford to replace existing plants and acquire new forest land to clear for coffee. By 1990, almost half of northern Latin America's shaded coffee plantations had been converted to sun-grown coffee fields (Tangley 1996). In major coffee-producing countries like Colombia, research stations and technical outreach programs propagated the hybrids and encouraged the switch.

I visited coffee plantations for the first time in Colombia in the early 1980s. I saw one plantation with sun-grown hybrids; the squat bushes carried so many beans that their branches could barely support the weight, and the sun beat remorselessly upon the coffee pickers. The experience contrasted with the next plantation I visited (Figure 13.1), where citrus and banana trees shaded the plants. Workers picked more comfortably in the shade than in the sun, and could eat ripe fruit during the day to slake their thirst and hunger. The owner and his family also enjoyed having fresh fruit, and they sold the surplus to local markets. But his bushes were taller and harder to pick from than hybrids and carried fewer cherries; he planned to adopt sun-grown coffee to increase his production.

As coffee-growing regions turned to sun-grown hybrids, unexpected consequences emerged. The removal of fruit trees reduced food availability and variety, with implications for food security. Plantations in full sun experienced higher incidence of soil erosion, suffered more from certain diseases and pests, and required chemical inputs to survive. In some places, sun-grown coffee died off during the dry season, and farmers had to replant shade trees. In Guatemala, the disease *mal de viñas* (a multiple stress syndrome that kills coffee) appears to be associated with sun-grown plantations and perhaps the effects of chemical inputs on the soils (MacVean *et al.* 2001). The greater productivity of hybrid coffee also contributed to a global growth in supply, which contributed to serious oversupply and record-low coffee prices at the turn of the twenty-first century.

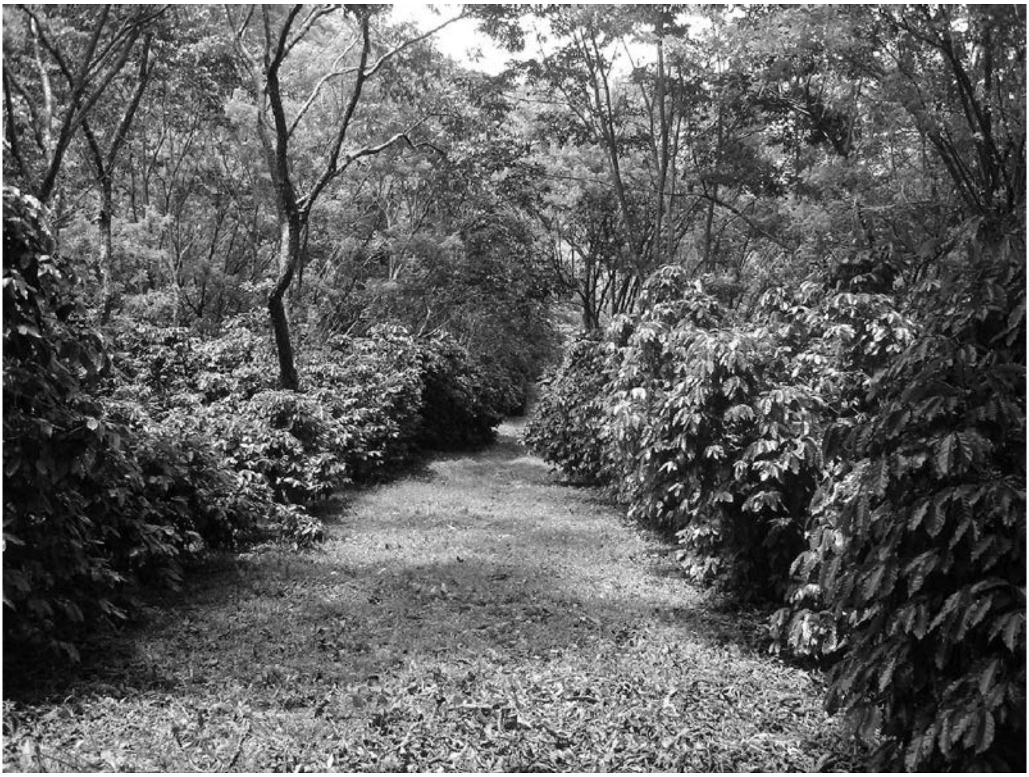

*Figure 13.1* **Shade coffee plantation** (Source: Catherine M. Tucker).

Even though sun-grown coffee has become the standard, many smallholders and poorer coffee farmers have retained traditional coffee plantations or combined traditional approaches with modern hybrid varieties and varying degrees of chemical inputs. In Mexico, for example, a variety of coffee cultivation methods can be found, from coffee grown in native forests, to agroforestry plantations with diverse tree species, to lightly shaded plantations with modest chemical inputs, to sun-grown plantations devoid of shade and dependent on heavy chemical inputs (Moguel and Toledo 1999).

### Chemical Inputs: Undesirable, Optional, or Imperative?

Farmers must weigh many considerations in cultivating their coffee, and each involves tradeoffs. One of the more complicated decisions involves the choice of using or avoiding chemicals. Farmers who use chemicals must also decide how much, which to use, and when to use them. For farmers with sun-grown coffee, chemical inputs are imperative. Farmers may start by treating seeds with a fungicide bath before they are planted. Thereafter, hybrid coffee plants grow optimally with periodic doses of chemical fertilizer. Depending on conditions in the local environment and their economic circumstances, farmers decide whether to administer herbicides, pesticides, nematocides, or fungicides.

Chemical inputs, especially fertilizers, increase coffee yields; this is true whether coffee is grown in sun or shade. Herbicides reduce the labor needed for weeding, which is a problem for coffee grown in sun or minimal shade (weeds grow poorly in dense shade). Pesticides, fungicides, and nematocides can reduce losses to insects and diseases. But chemicals shorten the life of the coffee plant, and pose risks for laborers as well as the natural environment (Martínez-Torres 2006). Many of the pesticides used in coffee production have been outlawed in the USA (Cycon 2007). Due to lack of protective gear and sanitation facilities, laborers in unknown numbers suffer exposure to toxic and carcinogenic chemicals (Consumers International 2005). Severe exposure, such as accidental ingestion of chemicals (which may occur if workers cannot wash their hands before eating or if drinking water is contaminated), can lead to death. The chemicals also build up in the soils, flow into streams, and leach into ground water. In some places, water contamination by coffee-processing effluents has led to clean water laws and enforcement efforts, as has happened in southern India (Damodaran 2002).

Although chemical use achieves high productivity in the short term, it is unsustainable in the long term, because chemical use depletes soils of organic material, beneficial microorganisms, earthworms, and mycorrhizae that help maintain soil fertility. Pesticides eventually become less effective, because pests become resistant. Thus chemical use ultimately reduces yields, degrades the natural environment, and can create "super bugs" that withstand pesticides. One farmer asked me why his insect problems had worsened after he began to use pesticides. He had become dependent on increasingly useless and expensive inputs, but he worried what would happen if he stopped applying them.

Farmers who use organic methods apply few or no chemical inputs (certain inputs are approved as natural and safe for use), and use shade to shelter their coffee. For farmers who cannot afford chemical inputs, there may be no choice; they are "passive organic." They usually put little labor and investment into their coffee, and obtain low yields. Active organic methods can achieve good productivity, but labor costs increase greatly. Farmers need to mulch, apply organic fertilizers, and perhaps use other natural soil amendments to maintain plant health and boost yields. They may need to compost their own fertilizers and experiment with natural means of reducing infestation and disease. For smallholders who have family members willing to work in coffee production, many of these labor costs can be absorbed without additional expense (Martínez-Torres 2006; Saito 2009). For smallholders without family assistance, and largeholders who must hire more labor year-round to work organically, the increased labor costs may be prohibitive.

Organic coffee production proves to be more sustainable than sun-grown coffee, even though farmers obtain lower yields. Lower annual productivity is compensated by the extended life of the coffee bushes, reduced soil erosion, and maintenance of soil fertility, all of which contribute to long-term productivity and sustainability. Organic farmers save the costs of purchasing chemical inputs, eliminate the risks of exposure to chemicals, and avoid contaminating their water and soils. In addition, farmers may be able to sell organic coffee for higher prices. As chemical inputs have become more and more expensive, farmers have become more interested in organic methods (Plaza Sánchez 1998). Studies in Mexico comparing sun-grown to organic coffee production have shown that organic production obtains higher net revenues due to lower expenses (Perfecto *et al.* 1996). It is not yet clear whether these results hold in other parts of the world.

### Advantages of Shade-Grown Coffee for Sustainability and Biodiversity Conservation

In many cases, farmers may not find it feasible to adopt organic methods. But shade alone greatly increases the sustainability of coffee cultivation, and reduces the quantity of chemical inputs needed. Research in Guatemala indicates that shade-grown coffee helps support carbon sequestration and soil conservation (Schmitt-Harsh *et al.* 2012). Shade protects coffee from excessive wind and torrential rain, moderates temperature swings, and increases organic matter and natural mulch through leaf litter. Some Mesoamerican farmers manage shade proactively to reduce the impacts of severe weather events, and those with traditional agroforestry typically include native leguminous shade trees that add nitrogen to the soil (Eakin *et al.* 2014; Tucker 2008). Shaded plantations can produce a variety of fruits, honey, firewood, herbs, and edible plants that can partly compensate for the loss of coffee income when prices fall. Moreover, shaded plantations serve as reservoirs for biodiversity. They often include native tree species as well as domesticated trees. In Central America, researchers found that traditionally managed plantations contain nearly as many species of beetles and ants as native tropical rainforests. Intensively managed plantations with less shade and tree diversity had about half as many arthropods, but sun-grown plantations had only a fraction present (Vandermeer and Perfecto 2005). Shaded coffee plantations provide critical habitat for migrating North American songbirds that spend the winters in northern Latin America and provide biological corridors for rainforest species to move between forest patches (Vandermeer and Perfecto 2005). The biodiversity benefits of shade-grown coffee have led to special certification programs, such as “Bird Friendly®” of the Smithsonian Migratory Bird Center and “Rainforest Alliance Certified™” of the Rainforest Alliance and the Sustainable Agriculture Network.

### Tradeoffs and Challenges of Shade-Grown Plantations

Although shaded coffee has many advantages, it also poses risks and challenges. The amount of shade needed varies with local climatic conditions. Farmers must have intimate knowledge of the local environment to manage shade well and adjust it through pruning, which requires additional labor. Plantations in hotter, drier environments can thrive with dense shade, but in cool, moist environments, heavy shade promotes fungal diseases and lowers productivity. Under certain climatic situations, especially where humidity is high and shade-related diseases occur often, shade-grown coffee may not be viable, and coffee must be sun-grown to produce well.

Shade-grown plantations can have economic consequences. Shaded coffee ripens more slowly than sun-grown coffee. Although this results in a more richly flavored bean, prices in coffee markets tend to peak early in the harvest. Shade-grown coffee can be of superior quality and receive low prices simply because it is harvested later in the season (Tucker 2008). To counteract this problem, farmers have few options unless they can be certified as organic, fair trade, Bird Friendly®, or Rainforest Alliance Certified™, all of which promise higher-than-market prices but incur certification costs.

### Climate Change Risks

In recent decades, coffee growers around the world have experienced droughts, hurricanes, heat waves, cold snaps, and sporadic rainfall patterns that have wreaked havoc on agricultural production. Climatic uncertainties have long been part of farming, but the frequency and severity of recent events appear linked to global climate change, which poses new challenges for coffee farmers, especially smallholders with limited resources (Perfecto and Vandermeer 2015). Climate change models predict that average global temperatures will climb by 1.8°C–4°C during the twenty-first century. Arabica coffee grows best at temperatures of 18°C–21°C; warmer temperatures have already reduced harvests and affected the quality of production (Baca *et al.* 2014; DaMatta and Cochicho Ramalho 2006). Lower elevations in many coffee-growing regions will likely become too warm and dry for arabica production (Davis *et al.* 2012). Robusta varieties can survive higher temperatures, but they cannot match the rich taste of arabicas (Magrach and Ghazoul 2015). Even though higher elevations in some areas will become more suitable for arabica coffees, scientists project a global decline in total land viable for coffee production (Bunn *et al.* 2015). If models are correct, Mesoamerica, which produces some of North Americans' favorite specialty coffees, will lose up to 30 percent of its coffee area by 2100 (Ovalle-Rivera *et al.* 2015). The greatest hope for climate change–resistant coffee may lie in Ethiopia, where wild coffee varieties represent a priceless reservoir of genetic diversity (Zamir 2014). Unfortunately, this diversity is under threat as Ethiopia's highland forests experience ongoing deforestation (Davis *et al.* 2012).

Warming temperatures also facilitate the spread of coffee's worst pests and diseases, including the coffee berry borer beetle. These pests have been moving into mountain coffee-growing areas that were once too cool for their reproduction, and causing damage (Jaramillo *et al.* 2009; Kutywayo *et al.* 2013). Similarly, climate change appears to aggravate the spread of coffee leaf rust, which can ruin bushes (Feed the Future 2013). An unprecedented outbreak of coffee leaf rust hit Central America in 2012, causing nearly a half billion dollars in crop losses for that season (ICO 2013). While some arabica varieties resist leaf rust, many farmers in Mesoamerica prefer varieties known for their flavor. They had not expected the disease to become a major threat. The combination of damage from rising temperatures and increasing coffee pests and diseases may compel some farmers to switch to annual crops or seek new land at higher elevations suited to high-quality arabicas. Such shifts in coffee farmers' livelihood strategies carry implications for soil erosion, watershed degradation, biodiversity, and loss of the world's last tropical mountain forests (Feed the Future 2013; Magrach and Ghazoul 2015).

### Can Coffee Cultivation Be Environmentally Sustainable?

It is not possible for humans to cultivate coffee without changing forests and impacting the natural environment. However, when compared to annual crops or sun-grown coffee, shade-grown coffee causes less soil erosion, helps protect remaining biodiversity, supports carbon sequestration, and reduces agrochemical use. Even so, climate change is raising new concerns and risks for coffee's environmental sustainability. Researchers are just beginning to explore whether certain management practices, including organic production and agroforestry, help mitigate climate change impacts and severe weather events (Perfecto and Vandermeer 2015; Philpott *et al.* 2008). Meanwhile, the social and economic sustainability of organic and shade-grown coffee continue to be debated, due to the increased costs of labor, certification expenses, and uncertain compensation. The next stage in coffee production—processing—has its own set of difficult challenges for environmental and social sustainability, as will be discussed next.

### Questions for Reading, Reflection, and Discussion

1. What is a coffee forest? How is it similar to and different from a naturally occurring forest?
2. If you were a coffee grower, what factors would you consider in deciding to plant sun-grown or shade-grown coffee? Which factors would be most important to you? Why?
3. Many environmentalists would argue that coffee cultivation should not be considered environmentally sustainable because of its association with deforestation. What do you think?
4. What are the possible impacts of climate change on coffee production? Why might climate change pose a threat to the future sustainability of coffee production?

## 14

# ENVIRONMENTAL CONUNDRUMS OF COFFEE PROCESSING

Once coffee cherries have been picked, they must be processed. Although there is a range of variation in the environmental impacts between shade-grown and sun-grown coffee, the choices among processing methods raise additional problems for the natural environment and the possibility for sustainability. There are two main choices for processing: the dry method and the wet method. Producers use the dry method to process robusta coffees. Dry-processed arabicas, called *naturals*, can be found where growers lack the technological infrastructure or resources for the wet method. Or they may prefer the dry method due to tradition, as in parts of Southeast Asia or Brazil, which is the world's largest producer of natural arabicas (Brando 2009).

### The Dry Method

The dry method involves picking all the coffee cherries from the bushes at once, and letting them dry in the sun. In the simplest dry method, picked cherries are spread immediately on a flat surface to dry. From a perspective of sustainability, this method presents many advantages; it is simple, low cost, generates minimal waste by-products, and requires few inputs other than labor to spread and turn the beans as they dry. Unfortunately, it results in lower quality and prices. Unripe and ripe cherries dry together, and the resulting beans have irregular shapes, unpredictable quality, and may contain small stones and other impurities. The beans may spoil, especially if exposed to rain, humidity, or poor drying surfaces. Often beans are dried on roads, dirt patios, or earth, and surface contaminants can taint the beans' flavor (Martínez-Torres 2006). Problems with the traditional dry method have encouraged additional steps to improve the process. By winnowing the cherries with a sieve, farmers separate out light debris (leaves, twigs, dust). Sifting removes heavier debris, and water floatation separates cherries by moisture content, which greatly increases quality. Brazil uses machinery to dry process its robustas and natural arabicas, but the rest of the world's producers of robustas and natural arabicas use the simple dry process, with some variations. In Honduras, where the wet method dominates, indigenous farmers nonetheless use the dry method and hand sort the cherries that are retained for household consumption. They believe that the bean gains flavor from the cherry as it dries (Figure 14.1). The complex flavors of coffees from parts of Southeast Asia and Africa may result in part from the dry method. Despite the risks to quality, beans processed carefully using the dry method have a full, rich taste ("full body") that is in demand for espresso coffee (Brando 2009).

Since 1990, semi-dry processing has emerged as a compromise between the traditional dry and modern wet method. The main innovation with semi-dry processing is to separate unripe cherries from ripe cherries through a mechanized sorting process with water. The result is a more reliable flavor and better prices (Brando 2009).

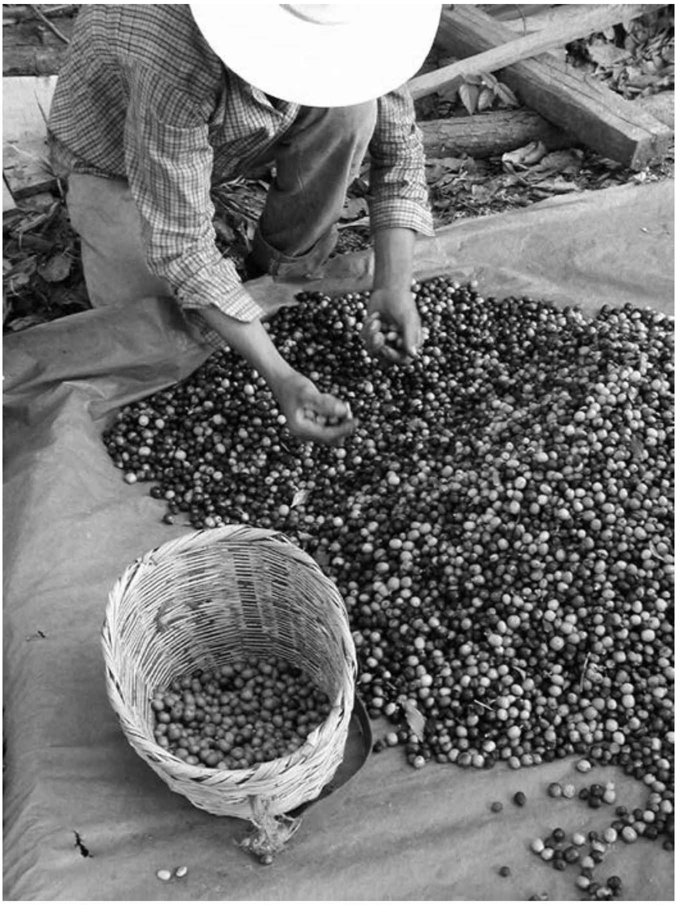

*Figure 14.1* **Sorting beans in dry processing** (Source: Catherine M. Tucker).

## The Wet Method

High-quality arabica coffees are processed by the wet method. As soon as the cherries are picked, they are passed through a pulping machine that grinds off the cherry (Figure 14.2). Pulping machines range in size from manual machines that a smallholder can operate alone, to elaborate industrial machinery capable of processing large quantities of beans. The cherries' mucilaginous interior sticks to the raw beans, and must be rinsed off by soaking in water (misleadingly called *fermentation*). Then the beans are dried. Smallholders usually dry the beans on flat surfaces, such as concrete patios, where they must be turned with a rake to dry evenly (Figure 14.3). Alternatively, beans may be dried on screen trays

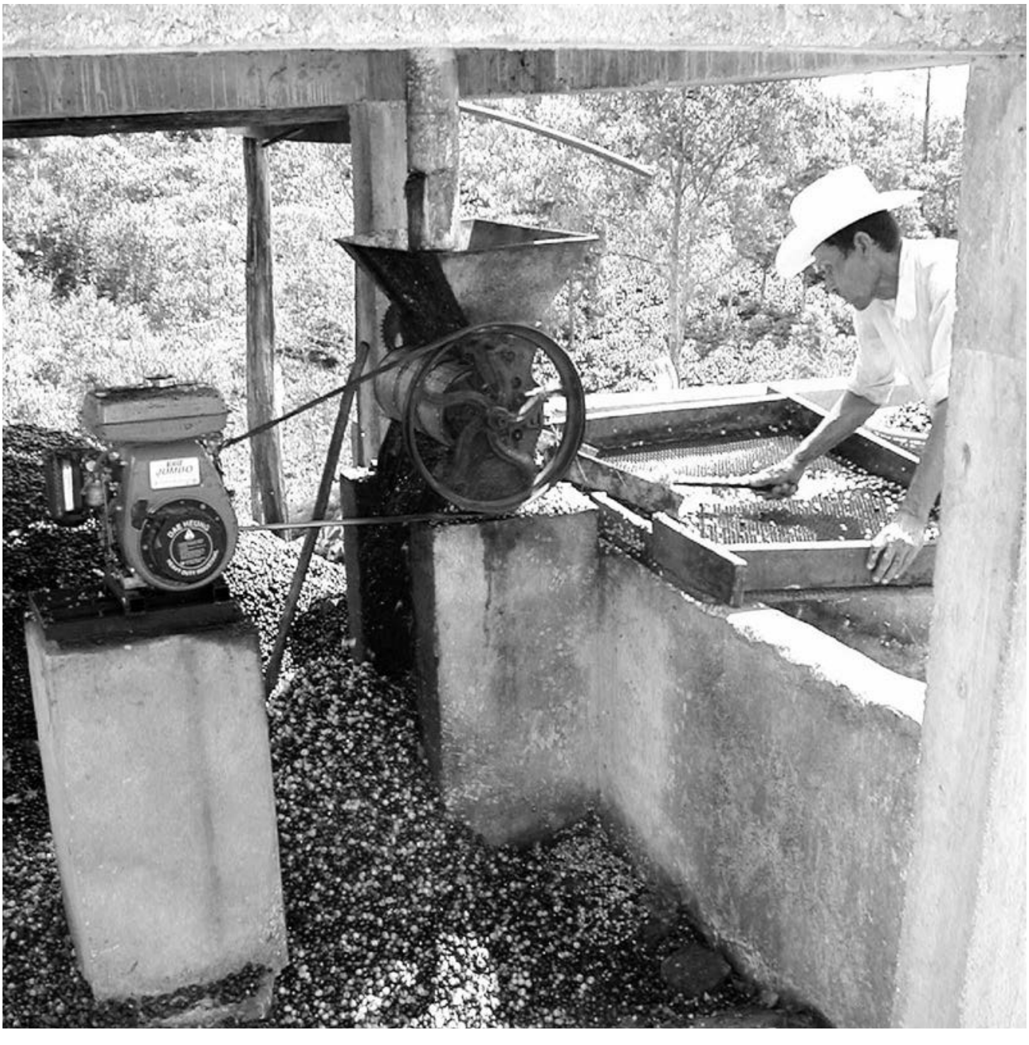

***Figure 14.2*** **Small manual pulping machine** (Source: Catherine M. Tucker).

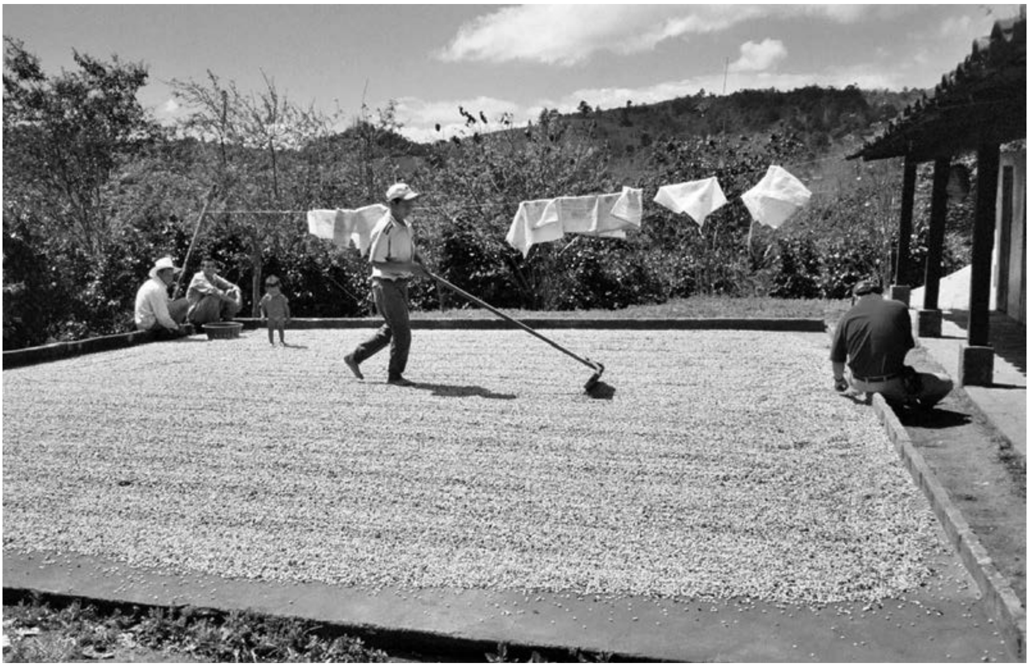

*Figure 14.3* **Raking coffee beans to dry** (Source: Catherine M. Tucker).

in hothouses (similar to greenhouses) to facilitate evaporation (Figure 14.4). If the quantity of wet beans is large, the preferred method involves large machines that blow warm air. The latter method requires sophisticated, expensive equipment and a fuel source, while the other methods require modest investments. Sun drying works well on smooth, clean surfaces, but hothouses and machine drying provide weather protection and more rapid drying.

Although the wet method produces high-quality coffee, it requires reliable and abundant water. One pound of washed coffee beans takes 18–20 liters (about 5 gallons) of water, which becomes polluted in the process and runs off into streams and ponds (Christiansen 2004:271). It also creates piles of discarded pulp and cherry skins that ferment and decompose into a foul-smelling mess in the tropical heat (Figure 14.5). One 6-month study in Central America estimated that the processing of 547,000 tons of coffee contaminated 110,000 cubic meters of water per day (Rice and Ward 1996). Runoff from the wet method contains a high concentration of the sticky matter washed off the coffee beans. As it decomposes, it causes toxic algal blooms, kills fish, and pollutes streams that rural people use for drinking and washing. Moreover, coffee processing takes place during the dry season when the cherries ripen and water is often scarce.

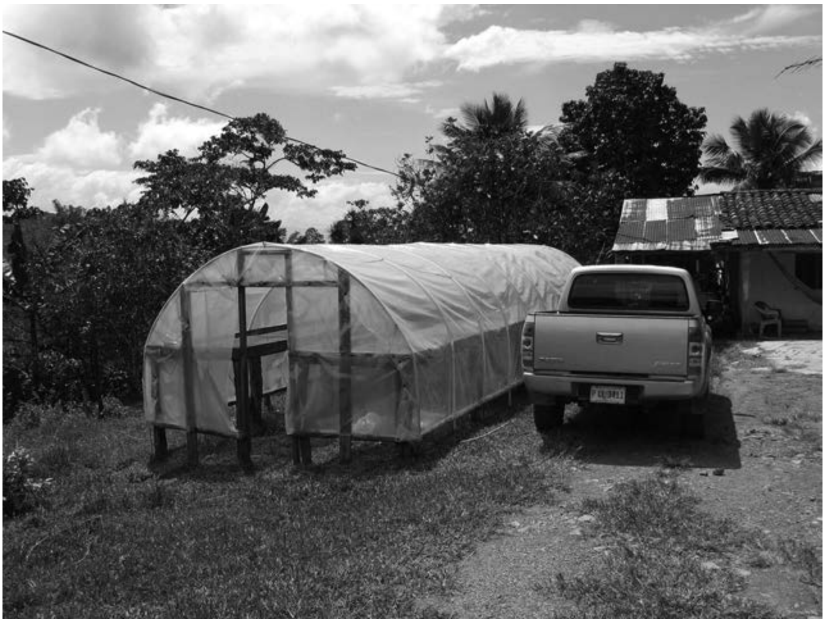

*Figure 14.4* **Hothouse used to dry coffee beans** (Source: Catherine M. Tucker).

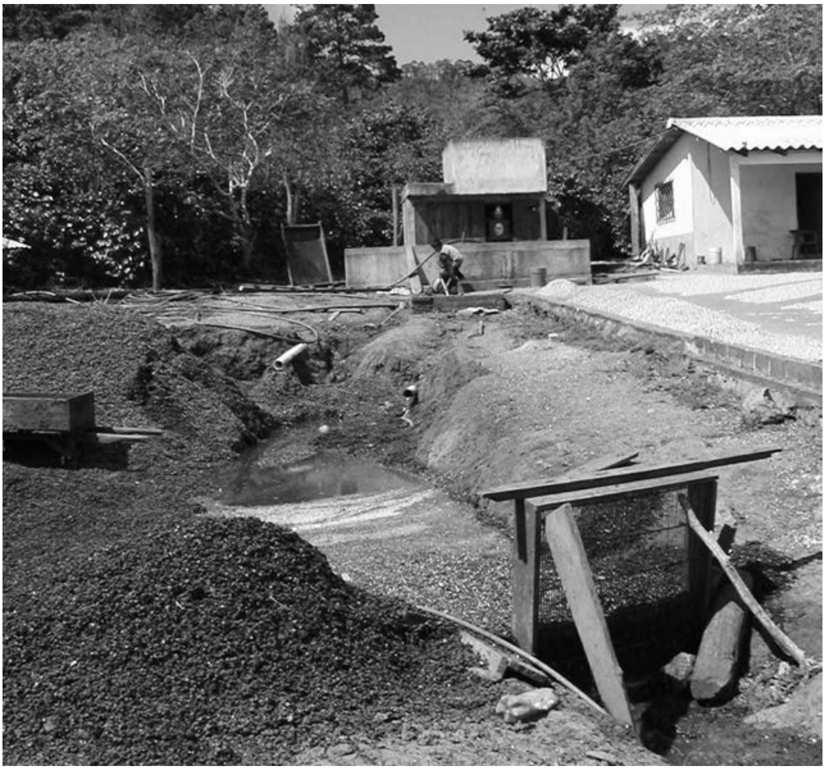

*Figure 14.5* **Decomposing coffee cherries** (Source: Catherine M. Tucker).

## Mitigating Environmental Degradation in Processing

With increasing concerns for sustainability and efficiency, new technologies are being developed to reduce the environmental damage caused by the wet method. “Ecological” coffee-processing machines reduce the amount of water needed by using it more efficiently, but the cost inhibits adoption. Fortunately, simple options exist to reduce waste and pollution. A retaining pond can be an effective tool to collect water runoff from the processing plant; the pond traps the wastewater to prevent it from contaminating streams. Treating the water with lime inhibits the growth of toxic bacteria and helps counteract the odor of decomposing matter. In the months between harvests, the water evaporates and leaves a nutrient-rich sludge that can be applied as an organic fertilizer. The discarded coffee cherries can be converted to fertilizer as well by introducing earthworms to decompose it. Earthworms can convert coffee cherries to rich compost when given a moist, sheltered area protected from sun, extreme temperatures, and wind (Christiansen 2004). If farmers do not have retaining ponds or earthworms, they can mix the discarded cherry pulp with other organic matter to make a nutrient-rich compost. Some farmers simply dry the pulp and spread it around coffee bushes. Thus the wet method can be made more sustainable, but it requires commitment and effort on the part of farmers and processing facilities to reduce waste and recycle by-products.

## Can Coffee Processing Be Environmentally Sustainable?

Processing coffee poses more difficult challenges for environmental sustainability than coffee cultivation. While shade-grown coffee provides clear advantages over sun-grown coffee for the environment, biodiversity conservation, and overall coffee quality, the choice between wet and dry methods poses a thorny conundrum. The dry method offers sustainability, but usually at the cost of quality. Despite the wet method’s problematic aspects, it will remain popular because most people prefer the flavor of washed beans and market prices respond accordingly. Technological advances in the wet method allow for coffee to be processed with less waste, but these advances cost money and require extra work and commitment on the part of processors. Only a few certification programs stipulate that processing must be done in ways that mitigate waste and environmental degradation (such as Sustainable Agriculture Network/ Rainforest Alliance certification) (Sustainable Agriculture Network 2016). Few consumers realize that processing poses risks to the environment, so they do not seek sustainably processed coffee. Producing nations have begun to recognize the risks of water scarcity and contamination associated with coffee processing, but efforts to improve the situation are slow because other problems absorb scarce resources.

Beyond environmental sustainability, coffee also raises issues for social sustainability. Most of the world's producers are smallholders who barely make a living. Many cannot afford to send their children to school, seek medical care, or buy staple goods. Their real incomes have been falling; when inflation is considered, today's coffee producers receive less for their coffee than ever before (Eldridge 2016; Talbot 2004). For coffee to be successful in the long term, it is not enough for coffee production and processing to become environmentally sustainable. Coffee production also needs to be socially sustainable. The issue is not simply one of morality, but pragmatism. If farmers cannot make ends meet, they will begin to abandon coffee, as happened during the most recent coffee crisis. In addition, social sustainability involves access to basic infrastructure, health care, and education and respect for human rights. History teaches us that repression and deprivation can fuel social unrest, crime, and civil wars. Equity and respect for human rights benefit everyone. Social and environmental sustainability, however desirable, present seemingly intractable challenges due to coffee's volatile prices, the way the modern world system functions, and the current structure of the conventional commodity chain.

### Questions for Reading, Reflection, and Discussion

1. Compare the wet and dry methods for processing coffee. What are the environmental and economic advantages and disadvantages of each?
2. Why do you think opinions vary with regard to the impacts of the different methods on quality?
3. The author claims that coffee farmers will abandon coffee if they cannot make a living with it. If smallholders were to abandon coffee, what might be the consequences? How might coffee production and quality be impacted?

# Part IV

# MARKETS AND THE MODERN WORLD SYSTEM

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# 15

# MARKET VOLATILITY AND SOCIAL CALAMITY

In 1999, an unexpectedly large coffee harvest flooded global markets, even though speculators had been predicting slightly lower productivity. Vietnam produced a bumper crop of robusta beans, and Brazil's harvest increased as new plantations, established after a devastating frost in the mid-1990s, came into full production. Around the world, coffee prices slid, and then collapsed. As the bottom fell out of the market, the price fell below the cost of production. In many coffee-growing regions, growers harvested a minimal amount, let employees go, or abandoned their plantations completely. Families dependent on picking coffee had to find another way to support themselves; they migrated to urban areas or across international borders in search of jobs. The greater a country's dependence on coffee, the greater the impact of the coffee crisis. Guatemala and Ethiopia reported deaths from starvation in economically devastated coffee-producing regions (see Chapter 16). Economists debated which approaches could help coffee producers survive, and generally agreed that the future of coffee depended on a global reduction in production of low-quality coffee. International development agencies saw poverty and malnutrition increase dramatically in the countries, including Vietnam, where they had promoted coffee as a means of development and poverty reduction. Following economists' advice, the agencies recommended structural adjustments in coffee production. For nations that had increased coffee production at the suggestion of development experts, the recommendations must have been difficult to digest.

The coffee crisis of 1999–2003 was only the latest in a series of calamities associated with coffee production and markets in the last 250 years. Why are coffee prices so volatile? How has price volatility affected the history of coffee production and the lives of producers? This chapter explores these questions using several illustrative examples.

## The Infamous Coffee Cycle

The volatility in coffee markets can be traced in part to two principal characteristics of coffee production. First, supplies of coffee can change significantly over time due to unforeseeable events. Second, the delay of several years between planting and the first harvest makes it difficult to match supply to demand. The combination of these two factors results in the coffee cycle: supply periodically exceeds demand and causes prices to plummet. As prices fall, producers usually cut back on production, leading to lower supplies. When supplies fall, prices rise, and producers plant more coffee, which eventually increases global supplies above what can be sold, and the cycle repeats.

At key points in history, coffee prices and available supplies changed dramatically due to weather conditions, disease outbreaks, and social instability. At other times, falling prices and the social inequities of coffee production led to rebellions and tragedy. During the past 500 years, fluctuations in supply also related to the disproportionate importance of a few major coffee-producing countries—starting with Yemen, then Java, then St. Domingue (Haiti), and most recently Brazil. When their harvests have failed, global market prices have risen; when harvests have been large, global market prices have fallen. Market speculation and national policies also intervened, either exacerbating or moderating the severity of price swings. Struggles among different factions to assert their interests, or simply to survive, also have been recurring issues in the global coffee economy.

### Human Misery and the Haitian Rebellion

During the mid-eighteenth century, St. Domingue became the world's leading coffee producer, providing half of the world's supply in 1788 (Pendergrast 1999). Java and Ceylon, which had risen to prominence during the late seventeenth century, continued to produce important quantities of coffee but became lesser sources. France in particular depended on St. Domingue's coffee, which was produced by slaves on large estates. Slaves, who numbered around 500,000, represented the majority of the population, and endured some of the most oppressive laws ever imposed by a colonial power. News of the French Revolution helped spark hope and inspire revolt. In 1791, the slave population rebelled and began a national liberation movement born of suffering and desperation. St. Domingue's coffee production collapsed during the conflict. World coffee prices rose, encouraging investment in coffee in the rest of the Caribbean and stimulating Brazil to set a course to become the world's largest coffee producer (Topik 2003; Clarence-Smith and Topik 2003). By 1803, the slaves had gained freedom, and on January 1, 1804, Haiti became the first colonial nation in Latin America to gain independence, and the only nation in the world to have gained it as a result of a slave rebellion. Although the liberation movement involved broad-based participation and support, the process of forming a unified and effective government faltered as the new nation confronted a bitter reality: the rest of the world did not welcome Haiti as an independent nation. The goal of building an equitable and democratic nation has proven elusive.

### The Devastation from Coffee Rust

Java held on as the world's second-largest coffee producer through most of the nineteenth century (Brazil claimed the top position). Along with Ceylon and Indonesia, Java provided significant coffee supplies to Europe. Then in 1876, a fungus that causes coffee rust (*Hemileia vastatrix*) spread through Southeast Asia and devastated coffee plantations (Topik 2003). The collapse of coffee production depressed the region's economies and shook colonial governments. Thousands of coffee pickers, a number of whom were migrant workers, lost employment. Many plantation owners abandoned coffee and moved to other crops, especially rubber. British colonialists switched to tea production for plantations in parts of Ceylon and India. In Java, the Dutch government endeavored to stimulate smallholder coffee production following the outbreak of rust, but had limited success. Coffee production had been declining already due to perverse government policies, and Javanese peasants had other economic activities that earned more income than coffee (Fernando 2003). Nonetheless, Southeast Asian smallholders experimented with disease-resistant coffee varieties and gradually restored coffee production within complex agroforestry systems (Clarence-Smith and Topik 2003).

Despite coffee rust's impact on Southeast Asian production, global coffee prices did not rise because Brazil's expanding production compensated for the losses. Meanwhile, many parts of Africa also suffered from coffee rust, although impacts varied greatly. The presence of coffee rust in Asia and Africa constrained production, which fell behind that of the Americas (Clarence-Smith 2003). Latin America remained free from coffee rust until the 1970s; by that time, it had consolidated its position as the world's dominant coffee-producing region.

### The War of a Thousand Days in Colombia

At the end of the nineteenth century, coffee prices plunged as excess production saturated the market. The War of a Thousand Days (1899–1903) in Colombia began as producers experienced falling coffee prices, and the government faced bankruptcy due to dropping income from coffee exports. Elite coffee planters, mainly members of the Liberal Party who argued for laissez-faire economic policies, went to war with the opposing Conservatives, as both sides aimed to dominate politics and set economic policies. The war resulted in 60,000–130,000 deaths, and destroyed or damaged many coffee plantations (*Encyclopaedia Britannica* 2009). A bipartisan coalition emerged in the wake of the war and, despite ongoing tensions, steered Colombia toward economic development, infrastructural improvement, and political stability for the next three decades. Unfortunately, competing interests and resistance among the upper classes to addressing social problems laid the foundations for violence and social conflicts that have confounded Colombia since the mid-twentieth century (Jiménez 1995b).

### Coffee Prices, Social Injustice, and Civil War in Central America

The development of Central American nations has been intimately linked with the spread of coffee and coffee producers' activist roles in national politics. In the latter part of the nineteenth century, Central American coffee emerged as a valuable commodity in European markets due to fine flavor, and attracted investors eager to make a profit. Large coffee producers in El Salvador, Guatemala, and Nicaragua became leading politicians and supported legislation in their favor (Williams 1994). In each country, the implementation of policies and laws to enhance economic growth allowed large coffee producers to expropriate land from indigenous people and coerce them to labor on coffee, sugar, and cotton plantations. In the process, indigenous cultures and traditions were undermined (McCreery 1995; Peckenham and Street 1985). The profound social inequities nourished a nascent resistance among indigenous peoples and rural poor that ultimately fueled Central America's civil wars of the 1970s and 1980s (Paige 1993; Williams 1994).

In El Salvador, falling coffee prices in the 1930s coincided with rising communist activity in the countryside. Indigenous peoples and poor mestizos who had been forced to labor on coffee plantations found themselves without work due to the economic crisis. Land scarcity, impoverishment, and perhaps hopes ignited by communist ideals of equity, intersected with the economic crisis to trigger the rebellion of 1932. The El Salvadoran government, convinced of a communist conspiracy, sent the military to massacre thousands of indigenous people who were struggling to regain their land rights and improve their living conditions. The dominant classes believed that they were upholding civil order by quelling threats to the status quo from indigenous people and communists. As one scholar observed, "Actually, what they were doing by contributing to these sad and tragic events was mortgaging the democratic future of their country for years to come" (Pérez Brignoli 1995:256–257).

### The Coffee Cycle and Brazil

By the late 1800s, Brazilian coffee represented two-thirds or more of global coffee production in every year. The growth in global coffee supply, led by Brazil, resulted in a 40 percent drop in coffee prices between 1875 and 1886.

Falling coffee prices, along with improvements in coffee-processing machinery, encouraged North Americans to drink more coffee. Annual per capita coffee consumption in the USA jumped from 6 to 13 pounds between 1870 and 1900, indicating coffee's growing popularity (Jiménez 1995b). Even so, demand did not grow as quickly as supply, and low prices threatened producers' economic well-being. In 1887, a killing frost hit Brazil and sent world prices higher, but plantations recuperated by the end of the century and prices collapsed. Twelve subsequent severe frosts occurred between 1904 and 1994. With each frost, prices rose and encouraged geographic diversification and increased production, which repeatedly cycled into more coffee supply and lower prices (Topik 2003).

Brazil's predominant presence in global coffee markets compelled it to take extraordinary steps to protect producers. It followed the policy of exporting the amount of coffee that global markets could absorb after the rest of the world's production was taken into account. This strategy helped uphold world prices, but also encouraged other countries to expand production. Brazil's market share gradually fell as global production climbed. In the 1920s, coffee supplies vastly exceeded demand. The Brazilian government, anxious to shore up prices, disposed of tons of excess coffee by burning it or dumping it into the ocean. Within 10 years, Brazil destroyed the equivalent of 2 years of its coffee production (Daviron and Ponte 2005).

### Ramifications of the Coffee Cycle

The coffee cycle has posed a constant challenge for the economic development of producing countries, even though the contexts of coffee supply and price volatility have been changing. As coffee's geographic expansion and global production have increased, dramatic drops in supply have become less likely, but risks of overproduction have increased. Many nations have designed policy initiatives to manage coffee production and mitigate market volatility. According to some studies, the political dimensions of managing coffee and disseminating information influence the coffee cycle as much as available supplies. Brazil has attempted to ameliorate price fluctuations by storing excess production and keeping the quantity in storage secret. Similarly, Colombia has endeavored to maintain uncertainty about the actual size of its harvest and stored amounts. From another perspective, the economic dimensions pale beside the suffering and enduring inequities associated with coffee production through its history of slavery, land expropriation, forced labor, and the disruption of rural livelihoods and indigenous cultures. It is fair to say that coffee has shaped the histories of nations, social inequality, and human rights around the world.

## Questions for Reading, Reflection, and Debate

1. What is the coffee cycle, and why does it matter to coffee producers and consumers?
2. Why have Brazilian frosts had such a major impact on global prices?
3. Why do Brazil and Colombia think that price fluctuations will be reduced if they keep secret the size of their stored coffee supplies?
4. Given the relationships between coffee production and social tragedies, do you think it is possible to produce a commodity like coffee without economic problems or human suffering?
5. Besides coffee, what other major commodities experience price fluctuations? In comparison to coffee, do you think the reasons for price fluctuations of other commodities are similar or different?

# 16

# EFFORTS TO MITIGATE THE COFFEE CYCLE AND THE DISTRIBUTION OF POWER

Countries that compete in the production of a primary good rarely cooperate to control production levels in order to uphold prices. However, for a time in the mid-twentieth century, coffee-producing and consuming countries signed international agreements that stabilized coffee prices and helped mitigate the coffee cycle. Thus coffee became one of the first "regulated" commodities (Ponte 2002). Toward the end of the century, however, shifts in the geopolitical balance of power in conjunction with neoliberal economic policies and globalization processes undermined incentives for international coffee agreements. Indeed, processes of globalization have impacted the production and distribution of many goods. Today, clothing, computer components, electronics, and household goods are as likely to be manufactured in China, Mexico, India, or any number of countries, as in the USA. Profits increase if labor costs can be minimized; therefore TNCs move production and processing sites to regions where labor costs are low. Similarly, low labor costs result in cheaper coffee, but if coffee prices vary unpredictably, profits are also uncertain. By examining efforts to mitigate the coffee cycle within its historical context, it is possible to see how the distribution of power in coffee markets evolved during the twentieth century.

## Initial Efforts to Mitigate the Coffee Cycle

Between 1906 and the late 1930s, Brazil produced the majority of the world's coffee and demonstrated the utility of price stabilization policies. It compelled merchant firms to sign cooperative agreements, stockpiled surplus production, and controlled export volumes, even at the cost of destroying excess production. By these policies, Brazil wrested power away from brokerage firms that had controlled exports, and became a leader in shaping international coffee markets.

World War II (1939–1945) changed global market dynamics. Europe's coffee imports practically ceased, and coffee prices collapsed. Anxious to protect its interests and shore up Latin American governments that depended on coffee exports for solvency and stability, the US government signed the Inter-American Coffee Agreement in 1940. The agreement raised coffee prices by

60 percent, until the USA entered the war in response to Pearl Harbor (December 7, 1941). At that time, the USA froze its coffee import prices, and effectively took control of the global coffee market as the dominant buyer. During and following the war, coffee markets became fragmented as Europe's imperial powers favored coffee from their own colonies and placed import taxes and quotas on other coffees. Through this period, most producing countries attempted to protect their coffee production by establishing state-run market boards and institutes to control domestic prices and regulate exports (Daviron and Ponte 2005). Lacking international coordination, global coffee exports exploded and prices dropped precipitously by the mid-1950s. In Latin America, producing countries negotiated the Mexico Agreement (1957) and the subsequent Latin American Agreement (1958) in hopes of limiting production to stabilize prices. These accords failed because African countries, which emerged as major producers following World War II, did not participate and their production continued to swamp global markets.

### The Threat of Communism and the International Coffee Agreements

Low coffee prices in the 1950s coincided with the rise of the Cold War and fears in the USA of communist influence in Latin America. Military experts and political advisors expressed concerns that the low coffee prices could destabilize coffee-producing countries, perhaps leading to communist-controlled governments. European allies shared similar concerns, and consuming countries joined negotiations with producing countries to design an international accord to establish and enforce coffee-production quotas. By setting limits on global coffee production, consumers and producers alike hoped to benefit from more stable prices (and profits). The world's major coffee-consuming nations and most of the coffee-producing countries signed the first International Coffee Agreement (ICA) in 1962. In association with the ICA, the ICO formed as an intergovernmental body for addressing problems in the world coffee economy through international cooperation. Subsequent agreements were signed in 1968 (although the USA delayed), 1976, and 1983, which endured until 1989 (ICO 2009). Between 1962 and 1989, the ICAs were largely successful in mitigating price volatility and stabilizing global markets (Akiyama and Varangis 1990; Talbot 1997).

The ICAs worked because producing countries implemented policies to constrain production, and consuming countries cooperated by rejecting coffee that exceeded producers' quotas. Of course, producing countries attempted with each successive ICA to renegotiate for larger quotas. Some excess production certainly managed to be traded, in particular among countries that did not sign the ICAs. The ICO set an indicator price band; when prices fell below, quotas were tightened. When prices shot above the band, as when a severe frost hit Brazil in 1975, quotas were lifted until prices normalized. Under ICA regulations, the world avoided coffee crises, such as those triggered by excessive supplies in the late 1800s and 1950s. Moreover, the ICAs helped producing nations retain an important percentage of the profits from coffee. Small coffee producers in many parts of the world improved their living standards during this period, and many producing nations used the income from coffee exports to invest in infrastructural improvements and other development projects (Talbot 2004).

In 1989, efforts to negotiate a fifth ICA failed. Changes in global tastes had increased demand for arabica coffees, while demand for robusta (used mainly in instant coffee) had fallen. Negotiations failed to redistribute quotas accordingly among arabica- and robusta-producing countries, and this inflexibility frustrated roasters as well as arabica producers. Cooperation among coffee-producing countries fell apart with disagreements over quotas, free riding, and the problem of nonmember consuming countries that purchased (and exported) over-quota coffee at reduced prices. The USA's overriding incentive to back ICAs evaporated as the Cold War dissipated peacefully under Gorbachev's policy of *perestroika* (restructuring) in the Soviet Union (A. Brown 2007; Love 1999). Meanwhile, coffee-roasting TNCs, which at that time included Phillip Morris and Proctor & Gamble as well as Nestlé, had extended their control over the coffee commodity chain through the 1980s. The ICA constrained their efforts to further increase profits and market control; they lobbied against another ICA. The US government concluded that ICAs were no longer in its interest. US withdrawal ended the hopes for a renewed agreement.

### The Post-ICA Era and the Coffee Crisis of 1999–2003

Within 6 months of the end of the quota system, control over producer stocks was transferred from public agencies to private trading companies, and stocks moved from producing countries to consuming countries. Producing countries lost most of their influence in international markets, and price stabilization programs and market boards faltered or went bankrupt (Daviron and Ponte 2005). With market deregulation and reorganization, international prices dropped. According to the ICO, the indicator price for coffee averaged $1.34 per pound in the last 5 years of the ICA (1984–1989). Over the first 5 years after the ICAs ended, the indicator price averaged 78 cents per pound (ICO 2009). During 1994, drought and a frost in Brazil sent the price up, but the harvests soon recovered. Without quotas to limit production, every country produced coffee at will. The 1989/90 harvest, which was the last influenced by the quotas, amounted to 94 million bags of coffee. By the 1999/2000 harvest, production reached an incredible 130 million bags, well above predictions and far in excess of global demand of about 105 million bags (ICO 2009). Prices began a 4-year freefall, reaching a 100-year low in real terms, and falling below the cost of production for many growers (Varangis *et al.* 2003).

Falling prices became an international crisis as coffee farmers were unable to repay loans, coffee laborers lost their jobs, and countries dependent on coffee exports found their budgets in arrears. Between 1999 and 2001, Central American countries experienced a 44 percent decline in revenue, and 540,000 people lost employment (Varangis *et al.* 2003). In El Salvador, malnutrition affected 45 percent of the children in coffee-growing households. In Papua New Guinea, employment on coffee estates fell by 40 percent; smallholders' daily income fell to $1 per day, and many could not pay their children's school fees. In Ethiopia, where 1.2 million people were employed in the coffee sector, malnutrition surged as families tried to survive on one meal a day. Urban unemployment grew rapidly as coffee workers migrated to cities seeking work, and the government suffered budgetary problems because half of its income depended on coffee exports. Globally, the crisis exacerbated poverty, social unrest, rural-to-urban migration, and production of illegal drugs (Osorio 2003).

Most coffee farmers had limited options to cope with the crisis, but because of the costs implied in removing a perennial crop such as coffee, few considered replacing plantations with another crop. Instead, farmers reduced their labor in coffee, abandoned their plantations to migrate in search of work, or diversified into other activities. One cross-national study of the crisis in Mexico, Guatemala, and Honduras (Eakin *et al.* 2006; Tucker *et al.* 2010) showed that farmers' perceptions and responses varied, even when they experienced similar price declines. Farmers in Mexico and Guatemala perceived the greatest hardship from the crisis; most of their land was planted in coffee and they had limited options to adopt new crops. Having benefited from government programs in the past, they were disappointed that the government had failed to curb the crisis. They deeply felt their change of fortune. Honduran farmers in the study lived in a region where coffee had recently become an export crop. While they had fewer material goods than their Mexican and Guatemalan peers, they produced staples to feed themselves, had land to plant new crops, and had access to microcredit cooperatives. As a result, Honduran farmers depended less on coffee production, had alternative resources for food and income, and reported comparatively fewer impacts than their Mexican and Guatemalan counterparts (Eakin *et al.* 2006). Thus farmers' experiences during the crisis related to their level of dependence on coffee income, experience with government programs, and availability of land or other resources (such as microcredit) to diversify and compensate for low coffee prices (Tucker 2013). Unfortunately, few smallholder coffee farmers around the world had enough land or resources to adapt easily to the crisis.

## The Conventional Commodity Chain and the Concentration of Power

Although oversupply contributed to the coffee crisis, multiple factors combined to create the crisis. In order to understand the changes that set off the crisis, it is helpful to consider the coffee commodity chain (Figure 16.1). A *commodity chain* is defined as "a network of labor and production processes that result in a finished commodity" (Talbot 2002:703 citing Hopkins and Wallerstein 1986). At each link in the chain, actors have the opportunity to gain income. The total income from the commodity is distributed across each actor in the chain, and relative power in the market chain influences how much income is apportioned. Following the collapse of the ICAs in 1989, the producers' percentage of the total income from coffee fell steadily. Through the 1970s and 1980s, producing countries had retained about 20 percent of the total income, while consuming countries controlled around 55 percent. By 1995, the proportion obtained by producing countries fell to 13 percent, and consuming countries gained 23 percent (Ponte 2001). By 2002, coffee farmers received about 2 percent of the cost of a cup of coffee sold in a coffee shop (Osorio 2002). The change in this distribution of income related to reorganization in the coffee commodity chain and associated corporate strategies.

In the first link of the conventional commodity chain, producers sell their beans to intermediaries, who may be local- or regional-level traders (often called "coyotes" in Latin America), cooperatives, agents, or regional processors. Or they may sell to exporters or market boards, depending on the country. The coffee may change hands several times before reaching exporters who sell it as green beans to international traders. Beginning in the 1980s, international traders, including importers and brokers, began to experience restructuring. Small and mid-sized traders found themselves unable to compete. They went out of business, merged to form larger firms, or were bought out by large trading companies. While the international trading market became more concentrated, coffee-roasting TNCs decided to outsource their supply management. Traders had to improve their supply networks to meet TNC demands, and therefore pursued vertical integration by moving into domestic trade and sometimes even to estate production, which is a way to move "upstream," or toward the producer, on the chain. By outsourcing, TNCs gained flexibility; they became less dependent on any given supplier or trader and reduced costs. By concentrating on marketing and branding, TNCs increased market control and their percentage of the total income, and capitalized on opportunities to create new products (Ponte 2001). As long as global coffee markets continue to produce excess volumes, TNCs will be free to pick and choose, and keep the prices they pay low.

### TNCs and the Consolidation of Market Power

The curious thing is that most coffee consumers today barely notice price fluctuations. As recently as the 1970s, price changes in coffee markets were translated to consumers in higher or lower coffee prices. In 1976, when prices rose in the wake of a Brazilian frost, TNCs tried to mute consumer anger by resisting

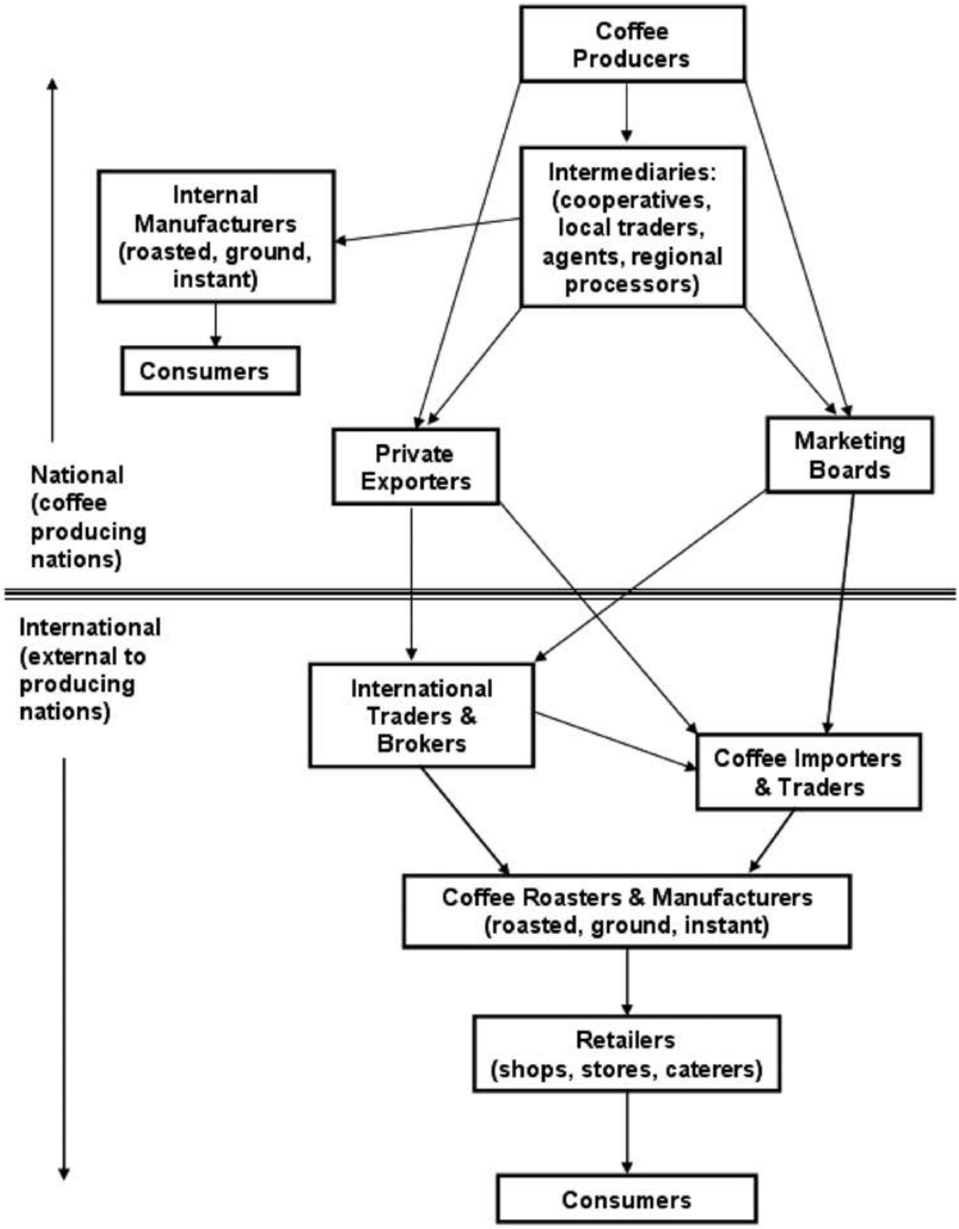
Coffee Producers
Internal Manufacturers (roasted, ground, instant)
Intermediaries: (cooperatives, local traders, agents, regional processors)
Consumers
Private Exporters
Marketing Boards
National (coffee producing nations)
International (external to producing nations)
International Traders & Brokers
Coffee Importers & Traders
Coffee Roasters & Manufacturers (roasted, ground, instant)
Retailers (shops, stores, caterers)
Consumers

*Figure 16.1* **Conventional coffee commodity chain** (Source: Catherine M. Tucker).

further price increases, shrinking the size of a can of coffee (16 ounces to 13 ounces) and recommending that smaller quantities of grounds be used to brew each cup. When prices fell again by 1980, TNCs did not return to the larger-sized can, and thus profits rose. They adapted this strategy successfully in subsequent moments of global price increases, by edging up prices and then neglecting to lower them. Thus the price that consumers spend for roasted and ground coffee became disconnected from global market prices (Talbot 1997). Today, advances in processing, roasting, and blending techniques permit coffee companies to maintain prices and similar coffee taste even when they add low-quality robustas to their blends. Thus they can pass off inferior coffee as high quality, and maintain or expand profits even if costs rise. TNCs typically seek the cheapest possible coffee to keep costs low. Now transporting, processing, and marketing in the conventional coffee chain cost more than the coffee itself.

Producing nations face a disadvantage. Since 1989, they have attempted repeatedly through the ICO to establish an effective price stabilization agreement. Although they have ratified new ICAs, no major consuming country has signed on. Producing countries have been unable to counteract the market domination of TNCs without the support of consuming countries. While the ICO has continued to operate, it has not been able to influence global markets. Producers must accept the prices offered in the market, and face hardship when prices fall. The need for income creates the perverse incentive to continually increase production, even though producers realize that it may backfire should prices collapse. Farmers have told me that they hope for harvests to fail in other parts of the world to lift their prices. Some governments of coffee-producing countries offer limited support or protection for coffee producers, but international donor agencies to which many producing countries are indebted require free markets as part of their neoliberal policy prescriptions. As a result of technological, political, and economic changes, TNCs have increased profits, market control, and the ability to manage coffee supplies to their advantage. Producers have lost income, and consumers have lost quality in the TNC brands while paying higher prices. In order to redistribute power and income more equitably, constraints would need to be applied effectively on TNCs' behavior within and across nations. In theory, TNCs might decide to constrain their own behavior out of concern for humanity and the planet. Alternatively, national governments and international accords could impose trade regulations and legal constraints on TNCs to compel changes toward social justice, economic equity, and environmental sustainability. Instead, recent trends in national policies and international trade agreements have tended to expand TNCs' ability to dominate markets to their own advantage (see Chapters 17 and 18 for further discussion). TNCs' control over markets substantially reduces the possibility of better prices for producers in the long term. Realization of the inequities in global markets has contributed to the development and growing popularity of alternative trade arrangements.

### Questions for Reading, Reflection, and Debate

1. If the price of your favorite beverage doubled or tripled, would you change how much you drink? If the price fell, would you drink more or the same amount? If everyone acts similarly, what would happen at the national or international level if the prices were to change dramatically up, or down?
2. When TNCs choose to substitute higher-quality with lower-quality coffee, what may be the broader consequences? Consider consumers, producers, and competitors.
3. Imagine that you are a farmer who depends on coffee production for most of your annual income.
    - Under what circumstances would you be willing to reduce your coffee production? Why?
    - If coffee prices went up, would you plant more coffee, even knowing the risks of price volatility? Explain your answer.

# 17

# A BRIEF HISTORY OF FAIR TRADE

> That so many farmers and workers are disempowered by a global trade system which enriches the few at the expense of the many doesn't mean trade itself is a bad thing. Trade can—and should—be used as a vital tool and catalyst to help close the gaps that exist across society. Fairer trade can create sustainable change by narrowing the gap between rich and poor, by creating opportunities for social and economic change, and by fostering respect for human rights and the world's precious natural resources.
>
> Marike de Peña, Chair of the Board, Fairtrade International (FLO 2016b)

When you go into a supermarket to buy coffee, you will find a dizzying array of choices, from standards like Folgers and Maxwell House and instant coffees to a range of specialty varieties that feature different roasts, decaffeination, and a few that carry "organic," "shade grown," or "Bird Friendly®" labels. Some of the coffees will carry a fair trade label stamped in a prominent location. It's hard enough to choose among so many alternatives, but the fair trade option presents another challenge. Nearly everyone has an idea about the meaning of fair trade, yet few are really sure what it means or why it is different from free trade. Part of the confusion arises from the seemingly countless labels and organizations claiming to be fair trade, and differing information on how it works and what it accomplishes. By exploring the history and recent developments in fair trade markets, this chapter aims to clarify why fair trade emerged, how it has grown to encompass many different organizations and certifications, and some of the challenges it faces.

## A Philosophy, a Movement, and Evolving Organizations

*Fair trade* refers to an alternative marketing strategy that aims to mitigate the inequitable trade relationships that have come to characterize the world economic system. In general, proponents share an underlying *fair trade philosophy* that economic relationships should work in favor of a more equitable and sustainable global society. Fair trade supporters aspire to reduce poverty, counteract unfair terms of trade, and promote social justice and human rights (Fridell 2007). Everyone who supports fair trade actively or philosophically can be considered part of the *fair trade movement.* Numerous organizations have evolved to participate in fair trade, including nongovernmental organizations, for-profit and non-profit businesses, labeling initiatives, certification entities, producer organizations, and cooperatives. Organizations that embrace fair trade as the purpose for their work ascribe to a common set of principles, including

1. Fair pay (a living wage)
2. Safe working conditions
3. Respect for children's rights and no forced labor
4. Transparency and accountability
5. Stable and equitable business partnerships between purchasers and producers
6. Environmentally friendly practices
7. Capacity building

Depending on the organization, additional principles may include democratic governance and community development, respect for cultural identity, prompt payment, women's empowerment and gender equity, and payment of a premium for producer organizations to use as they wish for social/infrastructural improvements. Despite sharing foundational values, the organizations vary in their roles and approaches. Moreover, these principles are ideals that prove difficult to achieve and enforce, which has given third-party certifiers important roles to play. Different perspectives on fundamental goals and ideas about how to achieve them have created challenges for fair trade, as discussed in this chapter.

## Origins of Fair Trade

The fair trade movement originated after World War II among efforts to avoid future global conflicts. In its earliest days, the movement aspired to transform the global economic system toward equity and respect for human rights. In the same period, leading thinkers concluded that inequities in the global economic system had contributed to World War II. They reasoned that if developing countries could obtain a fairer price for their goods, it would facilitate stronger, more diverse, and versatile national economies. To change inequitable trade relationships, economists and politicians pursued macrolevel (national and international) regulations and enforcement to ensure that nations of the Global South would receive a larger portion of the profits for their products. The Bretton Woods Accord in 1944 (Table 17.1) provided protections to support prices and

*Table 17.1* **Fair Trade Timeline**

| *Year* | *Activity* |
|---|---|
| 1944 | Bretton Woods Accord sets principles to foster post-WWII free trade and provides options to developing countries' governments to protect their economies from exploitative international trade. |
| 1946 | Edna Ruth Byler starts selling handmade lace made by Puerto Rican women in the USA, and returning the money directly to the women. |
| 1948 | Havana Charter is signed to encourage international commodity-control arrangements that ensure reasonable commodity prices and foster stability in southern countries. |
| 1949 | Sales Exchange for Refugee Rehabilitation and Vocation starts supporting refugees from WWII. |
| 1959 | Fair Trade Original forms in the Netherlands to supply the Dutch market with ethically sourced products. |
| 1964 | First United Nations Conference on Trade and Development (UNCTAD) starts working toward fairer trade between northern and southern nations. |
| 1964 | Oxfam Trading forms, evolving into the fair trade branch of Oxfam International. |
| 1968 | Overseas Needlepoint and Crafts Project, founded by Edna Ruth Byler, becomes SELFHELP Crafts. |
| 1973 | The Netherlands imports the first fairly traded coffee from Guatemala. |
| 1986 | Equal Exchange is founded to import fair trade coffee from Nicaragua to the USA. |
| 1988 | Solidaridad in the Netherlands establishes the first standardized criteria for fair trade and creates the "Max Havelaar" label for its fair trade–certified goods. |
| 1989 | The International Coffee Agreement (ICA) collapses when the USA refuses to negotiate new terms. |
| 1989 | Fair trade labeling initiatives start spreading across Europe, North America, and Japan. |
| 1989 | International Federation for Alternative Trade (IFAT) is founded as a global network of fair trade organizations. |
| 1990 | The European Fair Trade Association (EFTA), composed of 10 large European fair trade importers, gains formal status. |
| 1992 | The Fairtrade Foundation is founded in the United Kingdom with the support of many human-rights organizations (Christian Aid, Oxfam, Traidcraft, and the World Development Movement). |
| 1994 | The Network of European Worldshops (NEWS) incorporates as a seller of international fair trade goods. |
| 1994 | Fairtrade Foundation, UK, launches CafeDirect Coffee, Green & Black's Maya Gold Chocolate, and Clipper Tea as fair trade brands. |
| 1994 | North American Alternative Trade Organizations (NAATO) incorporates formally with an agreement among independent organizations that had been holding annual fair trade conferences since the 1970s. |
| 1995 | NAATO changes its name to the Fair Trade Federation. |
| 1996 | SELFHELP Crafts changes its name to Ten Thousand Villages. |
| 1997 | Fairtrade Labelling Organizations International (FLO) forms in Bonn, Germany, as an umbrella certifying organization to harmonize the various certification standards, coordinate certification, serve certified organizations, and promote fairer trade. |
| 1997 | Transfair Canada (now Fairtrade Canada) (an FLO affiliate) is founded. |

(*Continued*)

*Table 17.1* **Continued**

| *Year* | *Activity* |
|---|---|
| 1999 | Transfair USA (later Fair Trade USA) is established and starts certifying fair trade coffee for US markets. |
| 2000 | IFAT reports that global fair trade sales exceeded $2.6 billion. |
| 2000 | **F**LO, **I**FAT, **N**EWS, and **E**FTA form FINE to work jointly on shared concerns and development of an integrated monitoring system. |
| 2002 | FLO creates the "Fairtrade" certification mark to distinguish its affiliates and products from "fair trade" as used by alternative labels and in generic speech. |
| 2004 | FLO divides into two organizations: FLO and FLO-CERT. FLO-CERT takes on inspection and certification responsibilities; FLO retains responsibility to support members and set the Fairtrade brand standards. |
| 2006 | The Fair for Life Certification Programme is created jointly by the Swiss Bio-foundation and the Institute for Marketology. |
| 2007 | The world's three largest fair trade producer networks (representing Latin America, Africa and the Middle East, and Asia and Pacific) join FLO. |
| 2009 | IFAT changes its name to the World Fair Trade Organization (WFTO) with over 350 fully committed fair trade organizations. |
| 2011 | FLO changes its name to Fairtrade International. |
| 2011 | Fair Trade USA changes requirements for its fair trade certification to include large plantations; it drops affiliation with Fairtrade International. |
| 2012 | Equal Exchange drops affiliation with Fair Trade USA to protest the certification of large coffee plantations. |
| 2013 | The Fair Trade Federation, a WFTO member, reaches a membership of 250 organizations in the USA and Canada (FTF 2013). |
| 2015 | Fairtrade International reports over €5.9 billion (~$6.5 billion) in retail sales (FLO 2015), with 1,210 certified producer organizations in 74 countries, representing over 1.65 million farmers and workers (around 6 million people if family members are counted) (Fairtrade Canada 2016). |

(Source: Catherine M. Tucker).

stabilize developing countries' economies through modest controls on international trade arrangements. This approach received further support with the Havana Charter, signed in 1948, which endeavored to regulate international trade through commodity controls to assure reasonable prices. These agreements fostered import-substitution industrialization (ISI), an effort to facilitate industrial expansion in southern nations so they could capture greater profits by processing their primary products and selling the value-added goods. Progress was uneven; countries presented varying challenges and different political choices. Nonetheless, many countries expanded their industrial sectors, boosted employment, and began to reduce poverty under ISI measures during the 1960s and 1970s (Fridell 2007). While macrolevel initiatives advanced gradually, individuals and small businesses began to build direct trade relationships with producers and marginalized populations to offer fairer prices.

In the USA, fair trade can be traced to Edna Ruth Byler, an American businesswoman. During a visit to Puerto Rico in 1946, she saw women producing fine needlecrafts, and observed their impoverished conditions. She took some of their handmade lace to the USA, sold the goods, and returned the money directly to the artisans. Soon after, Byler founded the Overseas Needlepoint and Crafts Project (ONCP). She sold goods at the Mennonite World Conference in Switzerland in 1952; subsequently, the Mennonites decided to support the work. Across the next 30 years, she sold crafts produced by talented artisans living in developing countries, and spread her convictions that direct trade relationships could mitigate poverty. The organization evolved into SELFHELP Crafts, and then became the global fair trade organization Ten Thousand Villages (2015) with over $27 million in annual sales.

Byler's efforts contributed to the early spread of alternative trade organizations (ATOs), part of a pattern in North America and Europe in which church groups and social justice organizations became key supporters of fair trade (Jaffee 2007). In the United Kingdom, Oxfam (Oxford Committee for Famine Relief) began with an effort to alleviate WWII-related famine, then expanded into disaster relief and self-help development projects. Early on, it sold handicrafts made by refugees; today, Oxfam World Shops sell diverse fair trade products from partner organizations around the world (Nicholls and Opal 2005:21–22). In the Netherlands, Fair Trade Original (2016) formed in 1959 to bring ethically sourced products to Dutch markets. By the 1970s, ATOs in the USA and Europe started holding annual conferences to share information and cooperate toward meeting social justice goals. The growth in ATOs occurred in tandem with funding for ISI initiatives from international donor agencies, and the United Nations Conference on Trade and Development (UNCTAD) had some success encouraging industrialized nations to adopt regulatory mechanisms on trade. The 1970s represented a pinnacle of fair trade initiatives, because grassroots, governmental, and international mechanisms worked synergistically toward changing inequitable trade patterns (Fridell 2007). In this same period, however, governmental intervention in markets and international trade regulations received increasing criticism as economic growth rates declined in the Global North. Pressure to deregulate markets began to reverse steps that had been taken toward fairer global trade, and dissolved the system created by the Bretton Woods Accord (Brenner and Theodore 2003). The USA in particular made political decisions that led to market deregulation and undermined ISI initiatives.

## Fair Trade in a Free Trade Market

Today, the political principles that support free trade, market deregulation, privatization of state-owned enterprises, and the unrestricted flow of capital are known as neoliberal economics (Jessop 2002). Theoretically, free trade provides broad benefits, but it assumes that all actors have perfect market information, perfect access to credit and markets, and are able to switch to new productive options in response to market information. These assumptions do not hold in developing countries, where most producers lack all of these advantages (Nicholls and Opal 2005).

Free trade includes market deregulation—the removal of policies and barriers that limit the free flow of goods, such as tariffs and subsidies. Despite free trade rhetoric, northern countries have maintained trade barriers to protect favored sectors from external competition. Developing countries have been forced to eliminate protections and support for their own industries and primary product sectors (agriculture, mining, timber). While neoliberal policies have been associated with economic growth, the gains have been distributed disproportionately in favor of better-off socioeconomic classes, with negative ramifications for social justice, equity, and economic stability (Nigh 1997). The North American Free Trade Agreement (NAFTA) provides a case in point: The USA and Canada maintained their agricultural subsidies while Mexico had to eliminate its subsidies. The USA and Canada then sold their agricultural and forest products to Mexico more cheaply than Mexican producers could match. Inequality and poverty have increased in Mexico under NAFTA (Stiglitz and Charlton 2005).

The rise of neoliberal policies occurred as the political atmospheres in North America and Europe became unfriendly toward anything that could interfere with their interests in economic growth. The changes coincided with TNCs' growing market power. Given the shift in the political situation, ATOs chose to present themselves as compatible with free trade. They moved away from the fair trade movement's original position that regulations should restrain the capitalist business interests. By emphasizing that direct trade relationships helped the open flow of goods between the South and North, ATOs avoided the political opposition that might have arisen if they had spoken against free trade. The slogan "Trade not Aid" differentiated ATOs from international development agencies, while fitting within the neoliberal philosophy (Jaffee 2007).

In 1986, a group of socially concerned consumers founded Equal Exchange to import organic coffee at fair prices paid directly to producers. Meanwhile, a Mayan cooperative in Mexico asked the Dutch nongovernmental organization Solidaridad to help sell its coffee in Europe at fair prices. As a result, Solidaridad started the Max Havelaar label, adopting the name of a character who struggled for social justice in a popular Dutch novel (Martínez-Torres 2006). Max Havelaar created the first certification system, and inspired the spread of fair trade certification and labeling initiatives across Europe, the USA, Canada, and Japan. The rapid proliferation of different fair trade criteria and competing brands created problems for effective marketing, because customers encountered competing and sometimes conflicting information. Organizations realized that they had much to gain by coordinating their efforts through umbrella organizations. The first fair trade umbrella organization began in 1989 as the International Fair Trade Association, becoming the World Fair Trade Organization in 2009. WFTO members represent all types of participants in the fair trade value chain, from producer cooperatives to regional networks to stores that sell fair trade goods. WFTO members who sell fair trade coffee and other products guarantee that 100 percent of the content has been produced and purchased in accordance with fair trade practices. Many prominent fair trade organizations in the USA and Canada are WFTO members, including the Fair Trade Federation, Equal Exchange, and Ten Thousand Villages.

The collapse of the ICA in 1989 (Chapter 16), followed by the implementations of the North American Free Trade Agreement in 1994 and the World Trade Organization in 1995, spread concern among ATOs about the effects on coffee growers. Coffee had already gained recognition as the first agricultural fair trade commodity, and it became the leading product for many fair trade organizations through the 1990s. Social justice organizations in the United Kingdom created the Fairtrade Foundation in 1992 and began to sell coffee, chocolate, and tea. In 1994, a number of fair trade organizations in Canada and the USA coalesced as North American Alternative Trade Organizations, which subsequently became the Fair Trade Federation.

Meanwhile, different fair trade–certifying organizations developed an array of standards to assure customers that fair trade labels indicated verifiable fair trade practices. Max Havelaar joined with other certifying organizations in 1997 to create Fairtrade Labelling Organizations International (FLO). FLO created the international “Fairtrade” mark to set its members apart from other fair trade–certified labels. With continuing growth, FLO (now Fairtrade International) split in 2004, establishing FLO-CERT as its certification entity. Other certifying organizations include Rainforest Alliance, UTZ, and Fair for Life. Each fills a different niche in fair trade markets. Rainforest Alliance (2016) emphasizes environmental components but only requires that its certified products have 30 percent fair trade content. UTZ (2016) mainly certifies coffee, cocoa, and tea production and associated supply chains. It supports sustainable agricultural practices while allowing conventional agrochemicals and aims for a balance between strict standards and marketability. Fair for Life (2016) certifies food and nonfood products (such as cosmetics) and entities (including processors and factories) that don’t qualify for other fair trade certifications.

The number and diversity of fair trade organizations and certifiers, as well as a general growth trend in participants and sales, attests to the success of fair trade. At the same time, tensions have emerged as proponents struggle between commitment to their original ideals and the demands of operating within capitalist markets. Fair trade proponents express concerns that the emphasis has shifted from building partnerships for equitable trade to an emphasis on using certifications to meet consumer demands and increase sales (Darvai 2012).

## Transnational Corporations Enter Fair Trade

Changes in fair trade relate to the popularity of social justice goals, the perceived benefits of “Trade not Aid,” and a more consistent message from fair trade marketing. To broaden sales, fair trade activists debated whether mainstreaming fair trade goods through major outlets would weaken their message. Most felt that the benefits outweighed the risks, and hoped to transform TNCs’ business choices. Indeed, fair trade proponents have carried out targeted efforts to compel large corporations to sell fair trade and sustainable goods. For example, a public campaign pressured Starbucks to purchase fair trade coffee. Starbucks bowed to the pressure in 2002. The outcome appeared to be a great triumph for fair trade proponents. Starbucks’ initial purchases of fairly traded coffee represented only 2 percent of their total coffee acquisitions, but due to Starbucks’ size, it doubled the volume of fair trade coffee sold globally. However, Starbucks has made only minor efforts to expand its purchases of fair trade coffee. Instead, it created its own set of standards, “Starbucks C.A.F.E. Practices,” and now claims that 99 percent of its coffee is “ethically sourced” while purchasing relatively little coffee from WFTO or other 100 percent fair trade organizations (Starbucks 2016b). While C.A.F.E. Practices incorporates many features of fair trade, it certifies large plantations (which can outcompete small producers), and its requirements are less rigorous than those of WFTO or FLO-CERT. Starbucks’ actions demonstrate key features of TNC involvement in fair trade: First, TNCs can make a tremendous contribution to expanding fair trade, which should help producers in the Global South. Second, while some TNCs may have genuine commitments to social justice and environmental sustainability, they shift the terms to their own advantage, enhancing their public image and taking advantage of higher prices they receive for fair trade products.

TNC involvement has proven to be a double-edged sword. Although it has expanded the market for fair trade, it also has diluted the original purpose of fair trade and created conundrums for the movement. Whereas fair trade activists have aimed to increase equity and social justice by improving the terms of trade and income for producers of primary goods, TNCs focus on making profits by keeping costs as low as possible. The two goals are fundamentally contradictory.

The process appears to involve cooptation. The Italian philosopher Antonio Gramsci observed that politically disadvantaged groups and dissidents can challenge the dominant ideas, or the hegemony, in a hierarchical society by introducing potentially revolutionary ideas and propositions (Forgasc 2000). When an idea becomes influential enough to threaten existing relationships, those in power may respond by assimilating the idea. The process typically involves subverting the idea in a way that ameliorates its threat, builds societal consensus, and recreates existing power relationships (Katz 2006). When cooptation fails or the governing groups cannot find a way to assimilate the idea, a counterhegemony may succeed in replacing the existing hegemony. In other cases, groups in power may resort to overt coercion and violent oppression to eliminate counterhegemonic threats. More broadly, groups in power resist challenges by using overt and covert methods, and often a combination of both.

Walmart shows how cooptation can work. In 2015, Walmart created "The Sustainability Consortium" (TSC) and its badge "Made by Sustainability Leaders." TSC members include Nestlé, JM Smuckers, Monsanto, Dow Chemical, and Dupont. To place the badge on their products, companies pay a membership fee, but Walmart requires no verification that products meet any sustainability criteria (Craves 2015; Mitchell 2015). This and other examples of "pseudo-certification" undermine efforts of activists to assure that fair trade benefits producers and environmental sustainability. While some TNCs have augmented their commitments to social and environmental standards (Sahan 2016), others are "fair-washing" themselves through symbolic fair trade purchases or misleading use of labels. *Fair-washing* occurs when a business or program presents itself as committed to fair trade without adopting fair trade principles in its business practices.

From a Gramscian perspective, the fair trade movement carried counterhegemonic ideas with the potential to threaten the global economic hegemony. TNCs muted its transformative potential by coopting the ideals of social justice through symbolic actions, such as buying small amounts of fair trade products to use a "fair trade" designation on certain products. Once TNCs decided to enter fair trade, ATOs could not prevent it. TNC involvement highlights a central contradiction of fair trade: while aiming to alter the inequities of conventional markets, it depends on mechanisms of the same markets that generate those inequities (Jaffee 2007).

While it is unclear whether fair trade is transforming TNCs, it certainly appears that TNCs are transforming fair trade. On one hand, TNC involvement has meant that fair trade cooperatives have been able to sell more of their products; this is a major benefit, and a goal that fair trade supporters hoped to achieve by TNC involvement. On the other hand, TNC "fair trade" products now compete with the products of 100 percent fair trade businesses, which have fewer resources for advertising but a much greater commitment to support social and environmental sustainability. Thus competition among different fair trade brands and the number of options facing consumers have been increasing. What does this mean for wise consumer decisions? Does fair trade really help people live better lives? The next chapter considers these challenging questions.

### Questions for Reading, Reflection, and Debate

1. Have you seen fair trade labels where you shop? What kinds of items carry the labels? Do you buy them? Why or why not?
2. Do you agree that TNCs have coopted fair trade? Why or why not?
3. How did the rise of neoliberalism create challenges for ATOs? How did they respond? What other choices did they have?
4. What are the ethical puzzles and difficulties that have resulted as TNCs have become involved in fair trade?

# 18

# CONUNDRUMS OF FAIR TRADE COFFEE

## Building Equity or Reinventing Subjugation?

> *On a sunny afternoon, I sit down to talk with Don Celso, a founding member of a Honduran coffee growers' cooperative with fair trade and environmental sustainability certifications. After sipping on black, sweet cups of coffee on his front porch and discussing the most recent harvest, I ask, "Has fair trade benefitted the coffee growers in the cooperative?" Don Celso looks away, watching a bird flit through the fruit trees. After several moments, he responds, "It's hard to say. We are getting better prices, but we have to work harder to meet the standards, the certifications are expensive, and the prices are not as high as we expected. We have had trouble finding a reliable buyer. One buyer agreed to a very good price, but after the harvest, the buyer complained about the quality and offered a lower price. We didn't accept it. While we were looking for another buyer, the coffee was damaged due to poor conditions in the warehouse. We finally sold it on conventional markets for next to nothing. . . . The following year, the harvest suffered from a cold snap and torrential rain. We didn't meet our quota with the new buyer, which caused problems. This year, we have another buyer who promised us a premium but we are still waiting for it. Still, I think we have learned a lot. We have stopped using chemicals, which is better for our health and the environment. But I'm not sure if the higher prices are enough for our greater time and labor costs."**

Fair trade has grown from its modest origins to become an influential presence in global markets. Globally, WFTO includes over 350 member organizations in 75 countries, with regional networks in Europe, Africa, Asia, and Latin America. Fairtrade International—the largest fair trade umbrella organization—has 1,226 producer organizations involving 1.6 million farmers and workers in 74 developing countries, and 2014 global sales of ~$6.5 billion (FLO 2016a, 2016b). When compared to the total value of global trade in goods and services,

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*Excerpts from author's field notes, translated and edited to remove identifying details which exceeded $23 trillion in 2013 (UNCTAD 2015:v), fair trade is barely a blip, but it is a growing segment of the market.

Coffee remains fair trade's most important agricultural product; 56 percent of Fairtrade International certified farmers grow coffee (FLO 2016a). While fair trade promises important benefits, it also presents conundrums for producers who hope to make a better living and for fully committed fair trade organizations. What are producers' experiences with fair trade? Is fair trade fulfilling its ideals to make the world a more equitable and sustainable place?

## Challenges for Producers

Research on fair trade cooperatives around the world indicates that fair trade can provide benefits for coffee producers, but there are also challenges and drawbacks (Jaffee 2007; Sick 2008; Waridel 2002). Smallholder coffee producers who receive fair trade prices do better than their peers, especially when global coffee prices are low. Fairtrade International provides a guaranteed minimum price and a premium for producers to use as they wish. During the coffee crisis of 1999–2003, fair trade coffee growers received a significantly higher income than those who did not participate in fair trade. Prices on the regular market fell as low as 45 cents per pound, too low to cover the costs of coffee production. Fairtrade International affiliates were paid $1.26–$1.41 per pound, depending on quality (Cycon 2005). Coffee farmers who received fair trade prices generally were able to cover their costs and support their families, while others endured hardship (Bacon 2005; Osorio 2003; Varangis *et al.* 2003).

### *Gaining a Living Wage*

Since the end of the coffee crisis, market prices are better on average, but costs of labor, transportation, staple foods, education, and health care are also increasing. Due to these circumstances, Fairtrade International increased the minimum ("floor") prices for coffee in 2008 and again in 2011 (FLO 2007, 2011). However, producer costs vary globally, and producer income may be eroding. By contrast, other fair trade certifications, including UTZ, do not offer a guaranteed minimum price. Producers can thus be exposed to price fluctuations in conventional markets. Direct traders, who seek the very best coffee, also negotiate independently with coffee producers. Direct traders are relatively scarce, and only a small proportion of coffee cooperatives have been fortunate to gain relationships with direct traders who are fully committed to fair trade, thus gaining stability, security, and significantly higher prices (Cycon 2007; Weissman 2008). The fair trade goals of providing living wages for all and building truly equitable partnerships remain elusive.

### *Forming and Maintaining Cooperatives*

In order to receive fair trade prices, smallholder producers must be members of a certified cooperative. This principle supports democratic organization and gives smallholders access to markets. A smallholder may harvest less than 1,000 pounds of coffee, but international trade goods are shipped in standardized 20- or 40-feet-long containers that carry up to 35,000 or 45,000 pounds, respectively (Alken Murray Corp. 2016). For reasons of efficiency, fair trade buyers want to contract with cooperatives whose production can fill a container. It would be impractical to make dozens of individual agreements, and shipping a partially filled container would increase the final cost of coffee. For producers, forming a cooperative requires high investments of time and energy ("transaction costs") as individuals learn to work together. Some cooperatives struggle with internal shortcomings or external pressures (Lyon 2011). Other cooperatives fail to make a profit, and find the system to be impersonal and excessively demanding (J. Smith 2007). In some cases, locales have cultural or situational reasons to resist the requirement to form cooperatives, which could be seen as an imposition of the Global North. Fortunately, successful cooperatives offer many benefits including capacity building, access to information, and efficiencies gained through cooperation, which can contribute to better incomes and cultural resilience (K. Brown 2013). Moreover, most cooperatives invest the premiums in schools, health clinics, electricity, or other infrastructure that benefits the whole community (Linton 2009).

### *Costs of Certifications and Finding a Buyer*

Certifications entail costs for applications, audits, and membership. While fair trade certifiers may offer grants to reduce these costs, producers must invest in changes to meet standards and pay some certification costs. After receiving certification, many organizations struggle to find a buyer willing to pay fair trade prices. Only about 20 percent of fair trade–certified coffee finds a fair trade buyer; producers sell the rest to conventional markets (Cole and Brown 2014). Fairtrade International has set a goal for "half of all certified coffee producers to be selling 50 percent of their production on Fairtrade terms within 5 years of initial certification" (FLO 2016a:10).

Moreover, fair trade certifications require farmers to meet environmental and social standards set mainly by and for people of distant lands. For fair trade farmers seeking organic and shade-grown certification, the costs of following organic methods represent considerable demands on households and hired labor (Jaffee 2007). During my research in Honduras, I met farmers who were in the process of being certified by Rainforest Alliance. They had to have a certain number and variety of trees per hectare to meet biodiversity standards, and they had to place signs to label each building, including workers' dormitories, storage sheds, the family home, and the latrine. The signs lent an impersonal, odd appearance to the farms, as if they had become living museums for the certifiers. No one living on the farms needed a sign to know the purpose of each building. Moreover, certifying criteria are subject to change. A colleague working with coffee producers in southern Mexico informed me ruefully that she had encountered Mayan farmers' anger when they learned that to maintain their shade-grown certification they had to increase the number and diversity of trees in their plantations (H. Morales, personal communication, March 2008). The Mayan peoples' traditional coffee plantations have been recognized as some of the most biodiverse in Mexico, if not the world (Moguel and Toledo 1999). Farmers complained that since obtaining shade-grown certification, they had lost the freedom to decide how many and what kinds of trees they could plant. They resented the interference, knowing that they understood the local ecological and climatic conditions of their land much better than any outsider. Fairtrade International includes producer organizations in decision making, but many certifiers do not. Unfortunately, fair trade and other certifications create new challenges for producers, and often fall short in equitable decision-making power.

## Challenges for Fair Trade Activists and Organizations

Fair trade organizations also confront questions and concerns from committed activists, scholars, and watchdog groups. Questions and criticisms arise due to the gaps between fair trade's aspirations and its pragmatic realities.

### *Do Consumers and Fair Trade Organizations Benefit More than Producers from Fair Trade?*

While many fair trade producers still struggle to make a living wage, it is clear that fair trade organizations, certifiers, businesses selling fair trade goods, and consumers who want ethically sourced commodities are benefiting, and sometimes making a very successful living from fair trade. This observation has led some critics to argue that fair trade is "marketing poverty to benefit the rich" (Sylla 2014). This critique observes that much of the money generated by fair trade sales stays in the Global North. Consumers have greater selection of quality goods that provide them with (sometimes false) confidence that the production has met certain environmental and social standards. While producers have had to make changes in their lives and behavior to get certification, consumers do not need to make any genuine changes except buy something they might buy anyway. Fair trade also remains a specialty market; mainstreaming appears to have benefited corporations (that can use suggestive labels while buying few fair trade goods) more than producers, who still seek fair trade buyers. Another problem arises in the images used to market fair trade goods—often showing happy, exotic people whose dress indicates clear contrasts with Western culture and suggests a certain naiveté. Such images can reinforce stereotypes, misrepresent people's diversity and struggles, and implicitly reproduce the systemic inequities that create poverty (West 2012). Shopping alone cannot create a fairer world (Mitchell 2012).

### *Are New Certifications Diluting Fair Trade Principles? Or Do They Strengthen Fair Trade by Attracting More Businesses to Join?*

The recent expansion of fair trade certifications with flexible standards raises a number of concerns. An apparent easing and broadening of certification standards appears to weaken fair trade principles and may undercut traditional fair trade organizations that retain commitment to core principles. For example, Fairtrade International expects its members to practice all of its principles. Its coffee and other single-ingredient goods must contain 100 percent fair trade content (multicomponent products must have 20 percent fair trade content) (FLO 2016b). By contrast, Fair Trade USA (an independent certifier for businesses in the USA) decided to leave Fairtrade International in 2011 specifically to enact looser certification standards. Today, Fair Trade USA requires only 10 percent fair trade content in any product. Its new motto is "Fair Trade for All," which means that large plantations and corporations can be certified even though smallholder cooperatives already produce more fair trade coffee than the market can sell. What is needed is growth in demand for fair trade products. Competition from largeholders makes selling fair trade goods even harder for smallholders. Moreover, large plantations—certified or not—have been shown to treat workers less fairly than smallholders and cooperatives (Cole and Brown 2014). Equal Exchange dropped its membership in Fair Trade USA to protest the policy change.

It has also been argued that the more flexible certifications, such as Fair for Life, could encourage otherwise ineligible businesses and producers to adopt fair trade principles, including tourism organizations or small mining operations. Insofar as certification fosters workers' rights, supports social justice, and contributes to sustainability, more flexible certifications can make a constructive contribution. Yet it is difficult, even with third-party certifications, to assure an organization's steadfast commitment to fair trade practices. It is also a challenge for consumers, who may find it difficult to discern differences represented in the different labels.

### *Does Fair Trade Create New Inequities?*

While many farmers in fair trade choose to maintain their certifications (a good indication that they find the benefits greater than the costs), a number of farmers with limited resources find themselves unable to join. Fair trade proponents have realized to their shock that fair trade may be leading to a two-tier system: producers with enough resources to join fair trade cooperatives, and those who are too poor (Lyon and Moberg 2010). Unexpectedly, fair trade itself has exacerbated inequity by excluding the most disadvantaged farmers. Fairtrade International (FLO 2015) noted that 28 percent of its producers live in lower-income countries; the remaining 72 percent live in countries that are at least middle-income countries. The statistic reinforces the impression that fair trade has not been as effective as intended for reaching the world's most marginalized producers. Nonetheless, fair trade has been advantageous for those who find fair trade buyers and receive the premiums. Several studies show that compared to noncertified producer organizations, certified organizations have better incomes, greater access to credit, and are more likely to use environmentally sustainable techniques (Dragusanu and Nunn 2014; Nelson and Martin 2013). As is typical in a capitalist system, benefits are distributed unevenly. Fair trade helps at least some producers who otherwise would receive less.

## Reviewing the Evidence

The existing system of fair trade presents mixed outcomes. Fair trade in many ways has fallen short of its original goals, and in some ways has become captive to the markets that it originally had hoped to transform. Despite shortcomings, fair trade still aims to reduce inequities and offer a transformative alternative to dominant market arrangements.

> If we as a people do not control our economic system, that is to say our ability to satisfy our needs and our wants, if we leave this in the hands of the large multinationals who are loyal only to their stockholders, we do not live in a democracy. Our lives are dictated by a few. . . . This is why fair trade is imperative not only to the survival of impoverished peoples but to us all.
>
> (Grimes and Hernandez 2016)

## Questions for Reading, Reflection, and Debate

1. How does fair trade certification (and other certification programs) create new challenges or risks for producers?
2. What risks or uncertainties do consumers encounter when purchasing fair trade goods? What differences may exist across similar goods with different "fair trade" labels?

3. How could fair trade be made to work more fairly? Should consumers and businesses in consuming countries be expected to meet certain standards to purchase or sell fair trade goods? Why or why not?
4. Do you think that fair trade's efforts to mainstream coffee sales through TNCs have been more beneficial for producers, or for consumers and fair trade organizations?
5. The chapter discusses a number of shortcomings of fair trade. How might these shortcomings be solved?

## 19

# RIDING THE NEXT WAVE OF COFFEE

## Possibilities for Transformation

> There is nothing inevitable about the current structure of our economy. It is not the product of some kind of natural evolution. It is the logical outcome of a set of policies, and many people are beginning to have a different idea about how the economy ought to operate, and to act on that idea. . . . Along the way, we've learned that there is a lot to recommend an economy that is rooted in community. . . . We are swimming upstream against a powerful down current of public policies that are taking our economy in exactly the opposite direction. What we really need to do is to change the underlying structures that create the choices in the first place. . . . We can only do that by acting collectively as citizens.
>
> Stacy Mitchell 2012, Institute for Local Self-Reliance

The latest craze in coffee focuses on finding the most flavorful coffee beans, preparing them with awesome expertise, and creating a sublime experience for the discerning coffee lover. By most accounts, this is the third wave of coffee, in which coffee has become an artisanal or craft beverage rather than a commodity. The third wave encompasses individuals with a fanatical and passionate commitment to discovering, preparing, and savoring "the best coffee" (Reynolds 2009). Aficionados of third-wave coffee include adventure capitalists, avant-garde coffee shop owners, creative baristas, and discriminating elites for whom money is no object. It also includes a slew of struggling artists, students, activists, pundits, and otherwise ordinary people. Together, third-wavers seek "God in a cup"—a transcendent moment of ecstasy bestowed in the full sensory experience of sight, sound, scent, taste, and touch of a divine coffee (Weissman 2008). In some ways, the third wave represents the height of folly and futility: Does it make sense for a perfect coffee experience to be a major personal goal in this troubled world? Even so, third-wave aficionados could become part of the solution for global coffee markets that remain deeply inequitable and environmentally destructive. But for genuine transformation, we must envision a next wave of coffee.

*Waves* are used as a term to characterize widespread trends and transformations. We rarely see them until we realize their impacts. While perspectives on the time frame differ, the first wave of coffee involved the rapid expansion of production and spread of coffee consumption with little concern for quality. The second wave, with the emergence of specialty coffee shops, highlighted the social experience of coffee and the importance of quality. The third wave was born around 2000, as coffee connoisseurs started searching far-flung corners of the world for unique, unparalleled coffee varietals (Thurston *et al.* 2013). Rare specialty coffees, like Kopi Luwak (processed through the digestive tracts of Southeast Asian civet cats that love to eat ripe coffee cherries), Jamaican Blue Mountain, or Panamanian Geisha coffee, can demand startlingly high prices. In Cup of Excellence coffee-tasting competitions, the top-ranked coffee may be sold at auction for nearly $100 per pound (Weissman 2008).

The third wave has created coffee's most self-indulgent moment in history. From the perspective of Lévi-Strauss (1983), third-wave specialty coffees fall in the "cooked" or high-status food category, deemed "civilized" and prestigious due to specialized preparation and social contexts. For theorists following Bourdieu (1984), a study of third-wave coffee may offer insight to social class structure and relationships that shape cultural preferences (Manzo 2010). Third-wave coffee could be expected to gain broad appeal among other social classes attracted to goods associated with elite status; it may also elicit disdain among certain social classes, depending on their conditions, perceptions, and associations. More to the point, third-wave coffee is a product of the complex connectivities in the modern global economy (Ryan and Durning 1997). It is creating new experiences and connections among different places and peoples in the world. Even exclusive barista competitions (a key ritual of third-wave coffee culture) draw people of diverse socioeconomic, educational, and cultural backgrounds who critique and applaud baristas' coffee-making artistry.

This demand for quality coffee has emerged just as the world's arabica coffee experiences mounting challenges from changing climate, disease outbreaks, social-political strife, and economic stresses on smallholder coffee producers. The third wave, with its insistence on high-quality coffee, has the potential to pay smallholders well for coffee that protects the local environment, supports biodiversity, and provides a decent income for the people who grow, pick, transport, and trade coffee. Smallholder coffee growers produce most of the top-quality arabicas in the world. But as discussed, many fair trade–certified smallholder cooperatives struggle to sell their coffee for a living wage, and the economic situation for most noncertified smallholders is even worse. Third wave aficionados could harness their resources to strengthen the social and environmental sustainability of coffee production and offer generous compensation to more smallholder farmers and workers who produce excellent coffee. They are well positioned to partner with smallholders and ally with the full range of fair trade and environmental activists. At the same time, not all coffee producers can produce fine coffee, and the markets for fair trade and gourmet coffee appear to be saturated. Third-wave, fair trade, and environmentally conscious markets can help some producers, but they do not challenge the fundamental, systemic structures that maintain inequities in coffee markets.

What more could be done to improve conditions for coffee producers, build a fairer and more sustainable world, and support the future viability of coffee production? The history of the fair trade movement shows that even a committed and dynamic social-justice movement can be distorted by the structural arrangements and neoliberal rationality of the modern world economic system that prioritizes market efficiencies and profit maximization. Today's global economy falls miserably short in achieving what should be a central purpose: enhancing current and future well-being and sustainability of society and the planet. As human misery, social conflict, and environmental devastation continue to multiply, many economists acknowledge that changes must be made in the institutional arrangements that structure global trade and finances. Macrolevel regulations can be powerful tools for constraining wealth accumulation in the Global North and counteracting inequitable exchanges with countries and producers of the Global South, as observed with ISI policies following WWII and ICAs of the 1960s–1989 (Daviron and Ponte 2005; Fridell 2007; Talbot 2004). Eliminating trade barriers—especially in the Global North—is often recommended for "free" trade to benefit the Global South (Stiglitz and Charlton 2005; Sylla 2014). Pro-equity macroeconomic policies could help rectify the pronounced differences in infrastructure, capacity, access to information and credit, and other inequities that limit possibilities for the Global South to gain fairly from trade with the North. More broadly, coffee producers and producing countries could be empowered to capture value-added gains that accrue through processing, packaging, marketing, and attribution of symbolic values (Daviron and Ponte 2005). Coffee cooperatives that process and market their own coffee, such as Thrive Coffee of Costa Rica, earn much more than those that sell green coffee (Laporte 2013).

More fundamentally, progressive thinkers contend that the underlying values and principles of the global economic system should be reoriented toward emphasizing community and social relationships locally and globally (Daly and Cobb 1989). The degrowth movement holds that economies can thrive and foster equity and sustainability without continual expansion (Jackson 2009; Research & Degrowth 2016). Such a transformation implies profound changes in the way we think about economic relationships, how we distinguish between needs and wants, and how we choose to live our lives. Transformations in the world system depend on citizen engagement and collective action from local to global scales. Intentional change toward a fairer world system would be contentious and require compromise, consensus building, and great respect and sensitivity for diverse perspectives and cultural differences. There would be risks, disappointments, and setbacks. But if we do not try to transform the world toward equity and sustainability, the world will change anyway as social and environmental conditions continue to decline, and the concentration of wealth and influence continues to increase among a few powerful organizations and individuals.

The next wave of coffee is coming. Our choices, and those of many people, governments, and organizations, will shape its direction. If we care about the future of coffee and those whose dedication, sweat, and toil bring this unique beverage to our table, what should we do?

### Questions for Reading, Reflection, and Debate

1. What is the third wave of coffee? Why is this concept helpful for understanding trends in current coffee culture?
2. In what ways could proponents of third-wave and fair trade coffee help promote better livelihoods for impoverished coffee producers? What realities of the global economic system constrain the potential for consumer choice to benefit coffee producers?
3. If global markets were completely open—without barriers to trade—do you think that would solve the current inequities that keep most coffee producers poor? Why or why not?
4. The author believes, rather idealistically, that collective action can help make the world a better place. In what ways might such a belief be overly optimistic? What evidence from history or your own experience supports *or* contradicts the belief that individual and collective action can lead to social change?

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# Appendix

# A COFFEE CULTURE TIMELINE

| | |
|---|---|
| ~900 | Rhazes (~852–932), an Arab physician, writes about *bunn*, which may have been coffee. |
| ~1000 | Avicenna (~980–1037), eminent Arab philosopher, describes *bunn* in his Canon of Medicine. |
| ~1450 | Coffee known in Yemen (no reliable historical record documents the arrival) |
| ~1480 | Sufi religious faithful drink coffee to stay awake through late-night devotions. |
| ~1500 | Coffeehouses open in Mecca and Cairo. |
| 1511 | Kha'ir Beg, Mecca's chief of police, bans coffee and coffeehouses. |
| 1511 | The sultan of Cairo reverses Beg's ban on coffee. |
| 1521 | Cairo experiences conflicts between coffeehouse customers and neighboring households angered at the late-night carousing. |
| 1536 | Ottoman Turks occupy Yemen and take control of coffee production and trade through the port of Mocha. |
| 1537 | Oromo warriors invade Ethiopia, and war interferes with coffee production and trade, allowing Yemen to become the major producer and exporter. |
| 1555 | First coffeehouse opens in Constantinople. |
| ~1580 | Murat III, sultan of Constantinople, bans coffee and closes coffeehouses, which proves only temporary. |
| ~1600 | Pope Clement VIII purportedly baptizes coffee for Christian use. |
| 1600 | The British East India Company is chartered. |
| 1602 | The Dutch East India Company is chartered. |
| 1616 | Dutchman smuggles a living coffee tree from Aden (Yemen) to Holland. |
| 1624 | First record of coffee beans in Venice (some sources give 1638). |
| 1633 | The vizier of Constantinople, Murat IV, razes coffeehouses and punishes coffeehouse customers and owners by tying them in bags and throwing them into the Bosphorus. |
| 1640 | First record of commercial coffee sales in Holland |
| ~1650 | Coffee beans reach Germany by way of Holland. |
| 1650 | Oxford's first coffeehouse opens (some sources differ). |
| 1652 | London's first coffeehouse opens. |
| 1657 | Coffee appears on apothecary lists in Germany. |
| 1658 | The Dutch plant coffee in Ceylon (from seeds of the coffee tree smuggled from Aden to Holland). |
| 1663 | Regularly scheduled shipments of coffee to Holland from Yemen begin. |
| 1664 | King Louis XIV's purported first taste of coffee |
| ~1665 | The first Dutch coffeehouse opens in The Hague. |
| 1668 | Earliest known record of coffee in the New World |
| 1669 | Mohammad IV, sultan of Turkey, sends his ambassador Suleiman Aga to Paris; Aga entertains the French aristocracy with opulent coffee parties. |

| | |
|---|---|
| 1671 | Marseilles' first coffeehouse opens. |
| 1672 | Coffee sells commercially during a street fair on the outskirts of Paris. |
| 1674 | "Women's petition against coffee" published in London; men reply in favor of coffee. |
| 1675 | Charles II of England proclaims a ban on coffee and coffeehouses as "seminaries of sedition"; it is revoked before it takes effect due to public outcry. |
| 1679 | Hamburg's first coffeehouse opens to serve British sailors and merchants. |
| 1683 | Venice's first coffeehouse, The Blue Bottle, opens. |
| 1683 | Italy's first coffeehouse opens (possibly earlier, but records are unreliable). |
| 1688–1699 | The Dutch introduce coffee to Java. |
| 1689 | François Procope opens the Café Procope in Paris. |
| 1689 | Boston's first coffeehouse opens. |
| 1700 | London has 2,000 coffeehouses. |
| 1700 | Philadelphia's first coffeehouse opens. |
| 1706 | A coffee plant and seeds from Java arrive in the botanical gardens of Amsterdam. |
| 1711 | Britain raises import duties on coffee. |
| 1714 | Louis XIV receives a coffee plant from the burgomaster of Amsterdam; it is transplanted successfully to the botanical garden in Paris. |
| 1715–1717 | The French introduce coffee to the Caribbean (Hispaniola). |
| 1718 | The Dutch introduce coffee to Surinam. |
| ~1720 | Gabriel de Clieu smuggles a coffee seedling to Martinique. |
| 1721 | Berlin's first coffeehouse opens. |
| 1724 | Britain raises import duties on coffee. |
| 1727 | Coffee is planted in Pará, Brazil. |
| 1730 | Britons plant coffee in Jamaica. |
| 1732 | Bach writes the Coffee Cantata in Germany. |
| 1738–1745 | The War of Jenkins's Ear disrupts coffee shipments to Great Britain. |
| 1763 | Venice has over 200 coffee shops. |
| 1775 | Events culminating in the Boston Tea Party compel American patriots to forgo tea and embrace coffee. |
| 1777 | Frederick the Great of Germany issues a manifesto promoting beer over coffee. |
| 1781 | Frederick the Great bans coffee roasting except by wealthy Germans granted his permission. |
| 1790 | The first wholesale coffee-roasting company and the first newspaper advertisement featuring coffee appear in the USA. |
| 1791–1803 | An uprising and independence movement by slaves on St. Domingue (Haiti) causes a fall in coffee production, gives opening for profitable Brazilian expansion. |
| 1822 | The first prototype of the modern espresso machine is invented in France. |
| 1840 | The steam engine (developed by James Watt in 1765) is adapted to ocean-going vessels, which revolutionizes global shipping and facilitates coffee production in Central America. |
| 1850 | Brazilian coffee production amounts to five times that produced in the rest of the world. |
| 1875–1886 | World coffee prices fall 40 percent as production rises. |
| 1876 | Coffee rust disease decimates large coffee plantations in Southeast Asia. |
| 1887 | A killing frost hits Brazil's coffee plantations. |
| 1887 | Brazil establishes its first experimental station for coffee research. |
| 1898 | Global oversupply triggers falling coffee prices. |
| 1899–1902 | War of a Thousand Days destroys coffee plantations in Colombia. |
| 1900 | Invention of vacuum packing and long-term storage of ground coffee |

| | |
|---|---|
| 1906 | Invention of the first process for making instant coffee |
| 1906 | Brazil produces a record 82 percent of the world's coffee production. |
| 1906 | The first commercial espresso machine is manufactured in Italy. |
| 1908 | Frau Melitta Benz invents filter brewing in Germany. |
| 1927 | The National Federation of Coffee Growers of Colombia forms. |
| 1935 | Packaged, ground coffee amounts to 90 percent of US coffee sold. |
| 1959 | An accord to limit production is signed among many producing countries including France and Portugal. |
| 1960 | The Brazilian Coffee Institute promotes domestically owned instant coffee factories. |
| 1960 | Colcafé, a Colombian coffee roaster, opens a domestic instant coffee factory. |
| 1962 | The first ICA is signed jointly by consuming and producing countries to constrain overproduction and price volatility. |
| 1963 | Creation of the ICO |
| 1968 | The second ICA goes into effect, but the US Congress holds up confirmation. |
| 1971 | Starbucks opens as an independent coffee roaster in Seattle, Washington. |
| 1972 | The 1968 ICA is not renewed. |
| 1974 | USSR opens an instant coffee factory, stops instant coffee imports from Brazil. |
| 1975 | Severe frost damages Brazil's coffee plantations as the harvest is ending; almost half of plantations require replanting. |
| 1976 | A third ICA is signed. |
| 1980s | Philip Morris becomes the world's largest coffee company. |
| 1980 | A fourth ICA is signed. |
| 1981 | The National Federation of Coffee Growers of Colombia introduces the Juan Valdez logo. |
| 1987 | Howard Schultz buys out Starbucks and starts opening coffee shops by that name. |
| 1989 | The ICA collapses; world coffee prices fall with the elimination of quotas. |
| 1990 | Vietnam emerges as a producer of robusta coffee. |
| 1993 | Russia renews imports of instant coffee from Brazil. |
| 1994 | A frost in Brazil causes prices to rise temporarily. |
| 1997 | Green Mountain Coffee Company acquires rights to the Keurig K-cup. |
| 1999 | Vietnam becomes the world's second-largest coffee producer, pushing Colombia to third place. |
| 1999 | Coffee crisis of 1999–2003 begins as supply grows and demand stagnates. |
| 2000 | Starbucks agrees to start purchasing fair trade–certified coffee in response to pressure from activists. |
| 2000–2001 | World coffee prices fall to 100-year lows in real terms. |
| 2003 | Coffee prices experience a slight recovery. |
| 2008 | J. M. Smucker Company acquires Folgers Coffee Company from Proctor & Gamble. |
| 2012 | Sara Lee splits into two units; Douwe Egberts Master Blends 1753 forms with control over Gevalia and other coffee brands. |
| 2014 | Keurig Green Mountain reports total of 30 billion K-cup portion packs sold globally. |
| 2014 | Jacobs Douwe Egberts becomes a major coffee TNC with merger of Molendez International and Douwe Egberts Master Blends 1753. |
| 2015 | Kraft Foods splits; new TNC KraftHeinz controls coffee brands, including Maxwell House. |
| 2015 | JAB Group acquires Keurig Green Mountain Coffee. |
| 2015 | Starbucks expands to more than 22,000 coffee shops in 66 countries. |

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# INDEX

Abyssinia *see* Ethiopia
Adams, John: breaking the tea habit 55–6
advertising campaigns: and social values 20–2
agroforestry 43, 96, 100; in Southeast Asia 115
alternative trade organization 131–3, 135
American Revolution 55–6
anthropology of stuff xii–xiii
arabica coffee: best growing temperatures for 101; in Colombia 59, 61–2; companies substituting robusta coffee 22; harvested by hand 90; increased demand for 121; vs. robusta coffee 75–6, 84, 101; steps in production and maintenance of 86; sun-grown 97; *see also* dry-method processing, wet-method processing
ATO *see* alternative trade organization
Avicenna on coffee's effects 75

Baba Budan: sneaks coffee seeds to India 38
beer: consumption 46; in Germany 65–6
behavioral change 72, 74; counteracting social forces 71; and the human brain 70–1
Benz, Melitta: and filter-brewed coffee 19
biodiversity: and third wave 145; *see also* coffee plantation: and biodiversity
Bourdieu, Pierre: on preferences emerging from social class 11, 13–14, 16
Brazil: and coffee cycle 116–17, 19; coffee production in 60–1, 119; effort to balance supply and demand 117; and export tax 60; stabilization policies 119; sugarcane production in 60–1; use of machinery for dry process 104
Bretton Woods Accord 129–30, 131
bring-your-own-mug discounts 70
Britain: abandonment of coffee 63–5; early passion for coffee 63
British East India Company 40–1, 63
Byler, Edna Ruth 130–1

Café Foy 57
Café Procope: and literary luminaries 56
caffeine 6–7; and the French Revolution 56–7; and the Industrial Revolution 46, 48
Catherine of Braganza 64
Central America: civil wars in 116; and coffee crisis 122; and coffee politics 116; and coffee production 40, 46, 100, 102, 116; and contamination from coffee processing 107
certification programs: to combat environmental degradation 109; costs of 139; proliferation of 133; shift in emphasis of 134
chemical inputs 27–9, 98–9
climate change: affecting sustainability 102; causing loss of coffee cultivation areas 102; causing more frequent and severe weather events 101–2; increasing coffee pests 102
Coca-Cola 22–3; and American Civil Rights Movement 24; coffee-flavored 23; as good corporate citizen 24–5; and the Industrial Revolution; local and global contexts of 14; in World War II 23–4
coffee 4–5; in Africa 38–9; in the Americas 39; creative serving of 9; diseases affecting 97, 102; health effects of *see* coffee and human health; in the media 4, 20–1; and national identity 59–60, 66; as a patriotic drink 55–6; perceptions of 13, 145; profits 121; rituals 32; as a social

beverage 53; supply and demand 121; transportation of 30–1, 46; as tropical export 93; *see also* arabica coffee, robusta coffee, shade-grown coffee, sun-grown coffee
coffee bean 6, **90**
coffee cherry **89–90**; transection of **90**
coffee under colonial rule 38–9, 40, 42
coffee commodity chain 14, 31, 32, **123–4**; and concentration of power 123; TNCs' control in 123–6
coffee consumption 4–7, 9, 33; during the American Revolution 55–6; in Britain 64; in Germany 65–6; and globalization 14–5, 32, 36; at home 30–1; by income classes and personalities 16, 25; during the Industrial Revolution 45, 46–7, 48–9; in the Middle East 53, 55; in the USA 8, 15, 18–22, 24, 117
coffee controversies 53, 57
coffee crises 113, 116, 121–3, 138
coffee crisis 1999–2003 113, 121–2: in Ethiopia 113, 122; in Guatemala 113, 122; in Honduras 122; and malnutrition 122; in Mexico 122; in Papua New Guinea 122; in Vietnam 113
coffee culture 7; timeline 149–51
coffee cycle 113–14; in Brazil 116–17; and distribution of power 119; ramifications of 117
coffee in global networks 14–15, 34, 36, 119
coffee grower: in Colombia 62–3; challenges in fair trade 138–40; cooperatives 137, 139; disconnect from consumer 26–7, 31, 125; and effects of 1999–2003 price collapse 122; securing laborers 90–1; share of coffee trade profits 33, 93, 121, 128
coffee and human health 79–80: in children 20; complications in studies of 75–8; earliest description of effect of 75; evidence of problems with 78; evidence of benefits of 78–9
coffee hybrids: productivity of 86, 97
coffee imitation flavor 32
coffee lobby: in Colombia 21; in the USA 19–20
coffee in the Middle East 53–5
coffee nursery **85**: a day's work in 83
coffee packaging 30
coffee picker *see* coffee worker
coffee plant: caring for 84–5; smuggled from Yemen to India and beyond 38, 39; transplanting seedlings 84
coffee plantation **97–8**; and biodiversity 100–2, 139–40; and climate change 29, 101–2; and depleted or eroded soil 61–2, 97, 99; elements needed for 29, 89; exploitative 94; misrepresented description of 31; risk in 87
coffee popularity 7, 20, 25, 144
coffee price: collapse 113, 117, 119; disconnect between consumer and market 125; normalized with ICA 120–1; post-ICA 121–2; volatility 117
coffee processing: contamination from 30, 107; and environmental sustainability 109–10; machinery 30, **106–9**; mitigating environmental degradation in 109; and social sustainability 110; sorting beans **104–5**; traditional drying vs. mechanized drying 104–5; *see also* dry-method processing, semi-dry-method processing; wet-method processing
coffee production 29; choosing locations for 84; delay between planting and 83–4; dependence on 15, 63, 87, 95, 113, 122; and environmental sustainability 102; and labor demand 93–5; loss of international influence 121; machinery 90; and social injustice 115–16, 117; in Southeast Asia 115; steps in arabica 86; worldwide reduction of 115; *see also* organic coffee production
coffee production as tribute to colonial powers 42
coffee research design flaws 77–8
coffee rituals 32
coffee roaster 121, 123; independent 8, 22
coffee roasting 75–6, 125; temperatures 30
coffee rust 102, 115
coffee seed: planting 84
coffee shop *see* coffeehouse
coffee storage 30
coffee timeline of historical events 149–51
coffee worker 29, 31, 62, 89, 92, **93–5**, 97, 115; exposure to chemicals 99
coffeehouse 3–4; in the USA 56; in Constantinople 54–5; efforts to reduce waste 70–1; in the French Revolution 56–7; with global dimensions 10; in history 7–8, 53–8; independent 8–9,

22, 70; political debates in 54, 56, 58; and riots in Cairo 54; and the "small world" 8; and social change 53, 57–8; as social meeting place 8
Colombia: and coffee 21; marketing coffee 62; national identity with coffee 63; production of coffee in 61–2; social conflict in 116; *see also* War of a Thousand Days
Columbus, Christopher 37
communism threat in Latin America 120–1
conglomerates in coffee trade 15
connectivity: through food movements 34; global 14–17, 32; in third-wave coffee 145
Cooper, Anderson 23
cooptation 135
Costa Coffee 4
Costa Rica 92; and arabica coffee 90; smallholder coffee economy of 91–2
culture: definition of 7
Cup of Excellence coffee-tasting competitions 145
cybercafé 9

Da Gama, Vasco 37
Dawes, William 56
debt peonage 93
de Clieu, Gabriel: smuggles coffee plant 39–40
deforestation due to sun-grown coffee plantations 97
dependency theory 41
Desmoulins, Camille 57
direct coffee traders 138
dry-method processing **104–5**
Dunkin' Donuts efforts to recycle 70
Dutch East India Company 40–1

El Salvador and economic crisis 122; undermining of indigenous culture in 116
Enclosure Acts 47
environmental responsibility 73
Equal Exchange 132
Ethiopia: birthplace of coffee 6, 36–7; fight for intellectual property rights 33–4
Ethiopian coffee ceremony 32

factory worker 47–8
fair trade 127–8, 137–8; challenges for activists and organizations 140–2; connecting consumer and producer 34; cost of certification 139–40; in free trade market 131–4; future of 146–7; inequities in 142; mixed outcomes 142; origin of 128, 130–1; original purpose diluted 134–6, 141; principles of 128; social justice distorted by modern world system priorities in 146; tensions 134; timeline 129–30; and TNCs 134–6; who benefits? 140–1
fair trade coffee: origin of 16–7; reasons for choosing 25
Fair Trade Federation 133
Fairtrade International 137–9, 142
Fairtrade Labelling Organizations International 133; *see also* Fairtrade International
FLO *see* Fairtrade Labelling Organizations International
FLO-CERT 133
Folgers coffee 21
food: ignoring origins of 26; perceptions of 12–13
forced labor 42
Foster, Robert: globalization of Coca-Cola 14
Foucault, Michel: "body discipline" 48
Frederick the Great and coffee 65
free trade 131–2; and neoliberal policies 125, 132
French East India Company 38
French Revolution 56–7
Furman University commitment to sustainability 72
Furtado, Celso 41

Germany: and beer 65; and coffee 65–6
global markets 36, 114, 125–6; and fair trade 137–8; in World War II 119–20
global networks 14
Global North 146
global shipping 30, 46, 63, 139
Global South 146
Gramsci, Antonio: on cooptation 135
Green Dragon Tavern 56
guarana seed 6
Guatemala: and debt peonage 93; elite landowner coffee economy of 92–3; undermining of indigenous culture in 116; *see also* coffee crisis 1999–2003: in Guatemala
Gunder Frank, Andre 41

Haitian slave rebellion and independence 114–15
Havana Charter 130
Honduras: experience with certification 139–40; *see also* coffee crisis 1999–2003: in Honduras

ICA *see* International Coffee Agreements to mitigate coffee price volatility
ICO *see* International Coffee Organization
import-substitution industrialization 130
indentured servitude: in Brazil 61
Industrial Revolution 45–9; changed home craft to factory task 47–8; and coffee/tea consumption 46–7, 64; effect on lifestyle 47–8; effect on shipping 46; and fetishism of commodities 47; and physical repetition/inactivity 48; and population shift 47
ISI *see* import-substitution industrialization
instant coffee 20, 21, 69, 90; *see also* World War II: association with Coca-Cola and instant coffee 23–4
Inter-American Coffee Agreement 119–20
International Coffee Agreements: collapse of 121–2; to mitigate coffee price volatility 120–1
International Coffee Organization 120, 125
Internet and coffeehouses 3, 9

Java and coffee 38, 115
Joint Coffee Publicity Committee *see* coffee lobby: in the USA
Juan Valdez logo 62

K-cup 67–9; as center of social debate 67–8
Kha'ir Beg and prohibition of coffee and coffeehouses in Mecca 54

labor in the coffee industry: poorly paid 29; securing 90–1; *see also* forced labor, indentured servitude, slavery
Latin American Agreement failure 120
Lévi-Strauss, Claude: on patterns for interpreting foods 11; on categories of food 12–13, 145; on social meanings of food, 15–16

Marx, Karl: on separation of consumer and producer 34
Max Havelaar label 132–3
Maxwell House coffee 21
Mayan people: treatment of 92–3
Mexico 40, 46; coffee cultivation methods in 98, 100, 140; and fair trade certification 140; *see also* coffee crisis 1999–2003: in Mexico
Mexico Agreement failure 120
Mintz, Sidney: on global evolution of sugar 14
Mitchell, Stacy: on structure of economy 144
Moscone, Arianna: student leader in zero waste 72–3
Murat IV: violent reaction to coffeehouses 54–5

NAFTA *see* North American Free Trade Agreement
neoliberal policies 132
Nescafé *see* instant coffee
New Coke 20
Newton, Isaac 8
Nicaragua: undermining of indigenous culture in 116; migrant workers 92, 95
niche marketing in coffee shops 8–9
North American Free Trade Agreement 132

organic coffee production 29–30, 99–100, 102, 139
Oromo people: and coffee food balls 37
Ottoman Empire 37
Oxfam 131
Oxford Committee for Famine Relief *see* Oxfam

Papua New Guinea and price collapse 1999–2003 122
path dependence 43
plants containing caffeine 6
Prebisch, Raúl 41
Prince Edward University: "Canada's Green University" 72
*Principia Mathematica* 8

Rainforest Alliance Certified™ 101, 109, 133, 139–40
Revere, Paul: role in American Revolution 55–56
Revolutionary War, The *see* American Revolution
risks in coffee production 89, 115
roasters 22

robusta coffee 90; vs. arabica coffee 84
Roosevelt, Theodore, and Maxwell House coffee 21

St. Domingue 114; *see also* Haitian slave rebellion and independence
semi-dry method processing 105
shade-grown coffee **98**; advantages of 100–1; challenges of 101; and economic sustainability 102; for environmental sustainability and biodiversity conservation 100–1; and protection of plants 100; vs. sun-grown coffee 97–8, 109
Singer, Hans 41
slavery 42; in Brazil 60–1
smallholders: advantages of 42–3; in Colombia 61–2; and colonial rule 38, 40; in Sumatra 42–3
Smith, Adam writing *The Wealth of Nations* in a coffeehouse 8
social advances in the USA 74
social class 13–14
social meanings of coffee 11, 13, 15–17, 45
society: connections that influence ideas about food 11
soda fountain 22
specialty coffee 25, 33, 144
Starbucks C.A.F.E. Practices 134
Starbucks Coffee Company 4, 9, 24; application for trademark of Ethiopian place name 33–4; efforts to recycle 70; and fair trade 134; and waste 67
"Steps to Zero Waste" 72–3
study design flaws 77–8
sugar: consumption in Britain 48; and globalization 14
sugarcane in Brazil 60–1
sun-grown coffee: challenges of 97; vs. shade-grown coffee 97–8
sustainable development 96

Taster's Choice *see* instant coffee
tea 6; and colonial taxation in America 55–6; in the Industrial Revolution 48
Ten Thousand Villages: evolution of 131
third wave of coffee 144–6
TNC *see* transnational corporation
transnational corporations 6, 15; enter fair trade 134–6; and market power 124–6

UMass *see* University of Massachusetts Amherst
United Nations Conference on Trade and Development 131
University of Massachusetts Amherst commitment to zero waste 72–3
University of Wisconsin–Madison promoting refillable mugs 72
UTZ 133, 138

Vietnam: coffee in 59, 113

Wallerstein, Immanuel: view of world system 42
War of a Thousand Days 115–16
Warren, John: role in American Revolution 55
waste: attitudes toward 72; college campuses' efforts to reduce 71–3; life-cycle assessment of 69–70; from restaurants in the USA 67
waves of coffee 145
wet-method processing **106–8**
WFTO *see* World Fair Trade Organization
Wolf, Eric: on people in the "periphery" 42
World Fair Trade Organization 133, 137
world system: core areas of 41; formed from colonialism 43; north-south division in 41; dependency in 42; fairer 146–7; link with coffee 36
World War II: association with Coca-Cola and instant coffee 23–4; changed global market dynamics 119; inequities contributed to 128
Worsley, Peter: view of the world system 42

Yemen: introduces drinking of coffee 37
yerba maté 6